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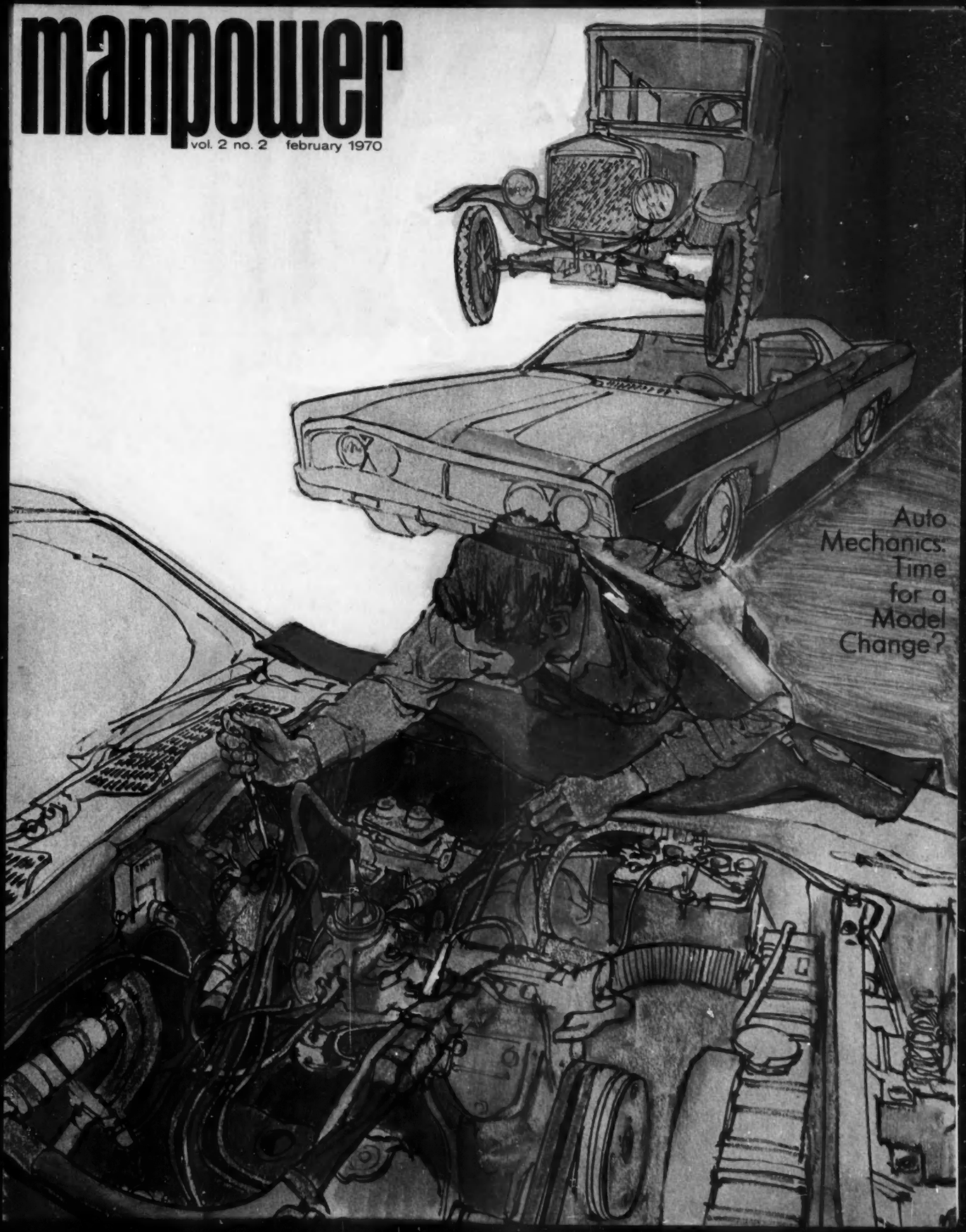


Auto Mechanics: Time for a Model Change?

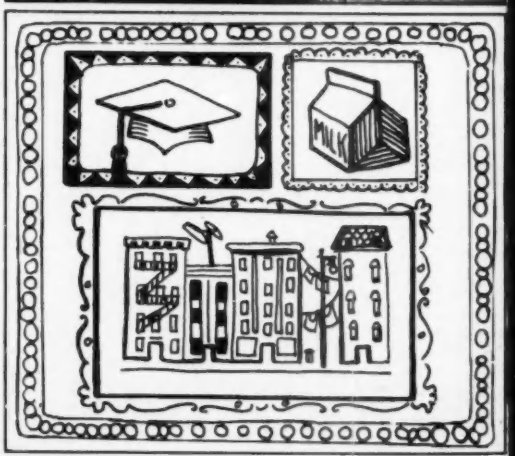
manpower

An American Institution — on Wheels

Clad in his white duster, the intrepid driver of yesteryear climbed behind the wheel of his Stanley Steamer and motored off, much to the amazement, amusement, consternation, and sometimes downright fear of his fellow citizens. "Get a horse," the cynics shouted in derision. But technology marches inexorably on. And though the Stanley Steamer disappeared, its more practical, if less intriguing, cousins prospered and proliferated. Fewer and fewer Americans got a horse; more and more bought cars.

A European invention, the automobile has become an American institution. It would be impossible to separate the history of modern America from the story of the development of the automobile. As Daniel J. Boorstin said in his introduction to John B. Rae's book, THE AMERICAN AUTOMOBILE, "The story of the automobile—so recent that we have hardly begun to think of it as history—touches nearly every aspect of the American economy and of American culture in this century."

There are over 101 million motor vehicles on the road in the United States today. And by most accounts, there are not enough qualified auto repairmen to keep them in good running order. For a closer look at the shortage of auto mechanics, what has caused it and what various segments of the automobile industry think should be done about it, see *Auto Mechanics: Time for a Model Change?* in this issue of MANPOWER.



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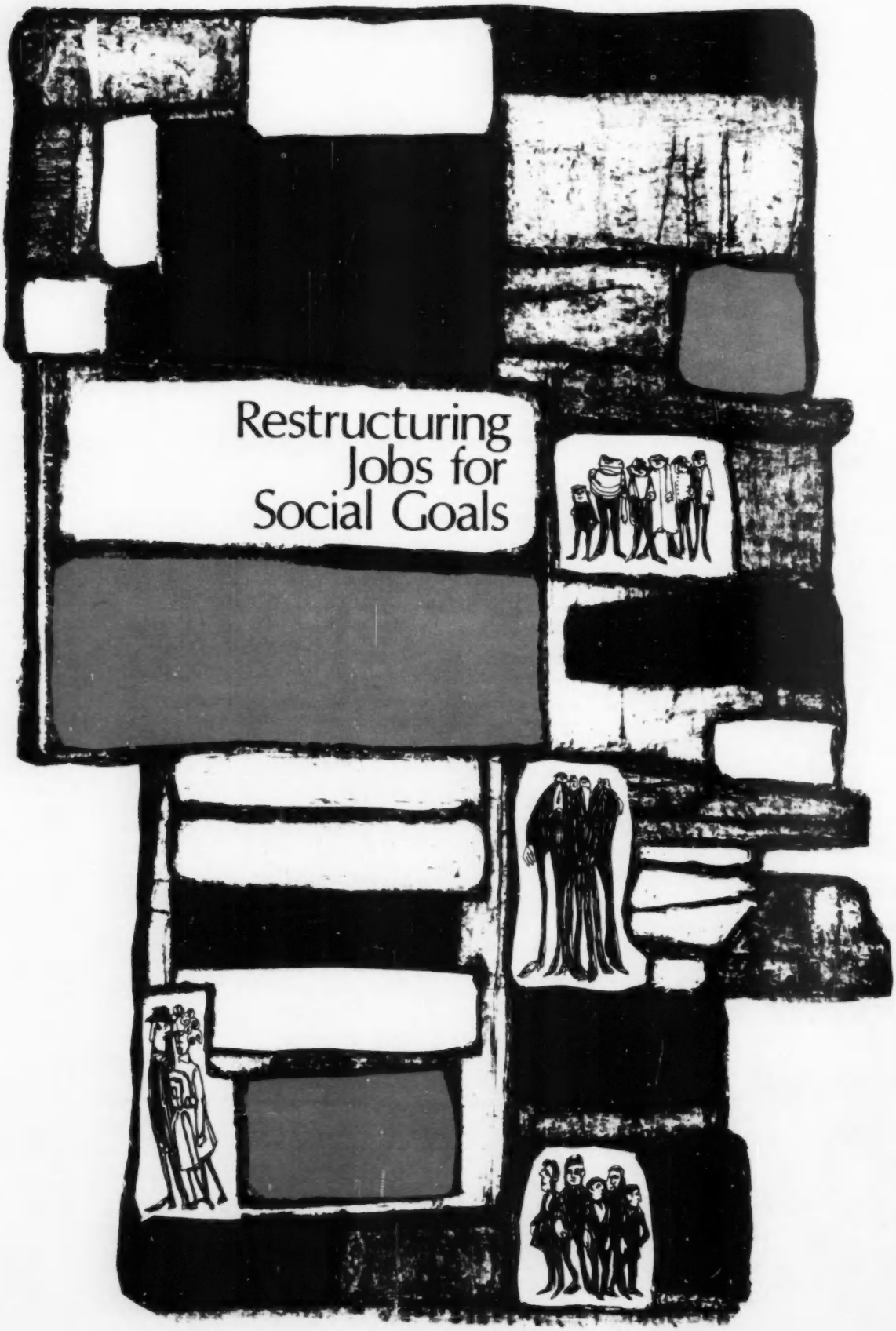

XUM

By Louis E. Davis

America's industrial era, which began about 1800, is coming to a close. The beginning of the transition into the postindustrial age is already visible in the automated technology now producing many goods, in computer technology providing services, in more tenuous relationships between work and economic production, and in new meanings for work and for relationships within and between working organizations.

Even under the best of circumstances this transition will be difficult. And the problems will be magnified if the Nation's enclaves of people who are unskilled, unemployed, and unsophisticated in the ways of the industrial era—the so-called disadvantaged or hard core—are not brought into productive society. One of the most important and widely used methods of bringing the unskilled into productive activities is on-the-job learning and experience.

To make possible quick, orderly on-the-job training (other than apprenticeship) for the unskilled, it often is necessary to design completely new entry-level jobs or to restructure existing jobs by dividing them into segments that provide progressive learning and experience stages. Job restructuring can play a crucial role not only in preparing the unskilled for today's industrial society but also in easing the Nation's transition into the fast approaching postindustrial era. To accomplish this, however, job restructuring must be viewed as a part of overall social policy that serves the needs of individuals, organizations, and the general public.

Technology Not Enough

In recent years, a theoretical framework has been developed that points to the requirements job restructuring must meet if it is to contribute to social goals. One fundamental premise of this school of thought is that in any purposive organization—say a corporation—there is a joint system operating, called a sociotechnical system. The people working together in the organization get their jobs done through the actions of a social as well as a technological system. Further, these systems so interlock that output becomes a function of the joint operation of both systems. The key word is "joint," for it is here that the sociotechnical idea departs from the more widely held view that a nation's social system is dependent on its technical system.

The bearing on the question at hand is this: Brilliant technology and enlightened motives are not enough. If the needs of the individual are not appropriately satisfied, there will be no effective outcome from any programs of job restructuring to provide entry and immediate follow-on jobs for the disadvantaged.

The second pillar supporting the sociotechnical concept is that every system is embedded in an environment shaped by a culture and its values, influenced by a set of generally acceptable practices, and permitting certain roles for its various components. There is a constant interchange between what goes on in a work system or an organization and what goes on in the outside environment; the boundaries between the environment and the system are highly permeable, and what goes on outside affects what goes on inside. There may be a period of cultural lag, but sooner or later, the societal tremor will register on the organizational seismographs.

This interchange, too, bears on the question of job restructuring. It means that programs will fail or barely survive if they focus on the restructuring of jobs without giving due attention to the outside world—the environment in which the jobs are embedded. Moreover, such programs will fail in time if they are not addressed to the emerging environment whose dimensions are becoming visible at the present time. What is done must be related to the evolving environment, not to the present one—and certainly not to the memories of an environment that is already dead and past.

Neither the society nor the organization is free to ascribe its own meaning to the concept of job restructuring; nor is the individual. Their differing slants on the concept (like the three sectors themselves) are and must be mutually interdependent.

Society's goals in job restructuring are to: (1) get untutored, unskilled individuals into productive work, (2) help them acquire skills, and (3) develop the means for providing them a viable future in the economy.

Job restructuring also must address itself to the needs of the organization or employer. First, management may see job restructuring as a way of coping with a labor shortage. To employers, job restructuring may mean the ability to fulfill production requirements with available workers.

Second, restructuring must make some contributions to the employer's economic objectives. (Today, on the basis that the unskilled and untutored do not adequately contribute to an organization's economic goals, Federal Government programs partially repay the estimated economic deficit. This is probably a short-run situation, at least for the American economy.)

Adaptive Workers Wanted

Third, the organization or company wants all the individuals in it to be adaptive and cooperative members of the working system, learning what is needed to be learned, and taking appropriate actions to maintain production. The organization will expect this behavior of workers holding restructured jobs. More importantly, it will require that restructuring of jobs for some of the work force not adversely affect the adaptiveness and cooperativeness of workers whose jobs are not restructured.

Individuals also have requirements and aspirations that affect the objectives of job restructuring. The first two of these are similar to society's aspirations: Entry into gainful occupation and acquisition of skills. Third and fourth, the tasks that are performed have to be meaningful to the individual, and the role he performs must be meaningful within the organization.

Finally, the restructured jobs must offer some prospects for a desirable future career. The idea of a career at the working level is a novel one all over the industrial world, including the United States. Accustomed to thinking of production jobs as entities in themselves, both

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managements and unions have lost any real sense of the dynamics of working life—of the movement of the individual from one stage of development to another.

Unfortunately, for many American workers other than professionals and executives, there is only one job over a lifetime. There is no "career" in the sense of an evolution of the individual matched by an evolution of the work that he does. The literature—indeed, the whole industrial culture of Western civilization, the United States included—views the job as a separate entity, independent of the idea of a career or even of simple job progression other than promotion.

Three Job Factors Vital

A considerable amount of formal and informal experimentation with job and organization design has occurred in the last 20 years in business and industry, mostly in the United States, Norway, and England. The results of the experiments point to three categories of job requirements as being essential — autonomy, adaptation, and variety. Autonomy means that the content, structure, and organization of a job are arranged in such a way that the people performing it can regulate and control their own work worlds. They can decide when they are doing well and when they are doing poorly; and they can organize themselves to do what is needed. Management's function is to specify the outcomes desired.

Autonomy implies self-regulation and self-organization, a very radical notion in the industrial world of the United States. It is radical in that only the critical interventions, desired outcomes, and organization maintenance requirements need to be stated by the managers, leaving the remainder to the workers. Further, it means that workers will be judged on the results of their efforts rather than on conformity to rules.

Nevertheless research shows that when the characteristics of jobs are such that the individual or the group can become autonomous in the working situation, the result is greater meaning, satisfaction, and performance. This has been demonstrated by reports on such widely different activities as coal mining, the maintenance of a chemical refinery, and aircraft instrument manufacturing.

Adaptation, which has been primarily the province of psychologists, requires that the elements of a job make it possible for the individual to learn from what is going on around him—to grow, to develop, to adapt. When jobs are created under scientific management principles, it is often overlooked that people adapt or learn and, in fact, that the organization needs them to adapt. In automated technology, the role of the individual depends on his adaptability and his commitment, because no one is around to tell him what to do. He adapts and acts in the situation as needed. Another factor too often ignored is that personal psychic and social growth of the individual can take place on the job. Such growth can be facilitated or blocked, leading to frustrations that are costly to the individual, the organization, and society.

Better economic performance and greater job satisfaction at all levels result when jobs and technology are designed to facilitate adaptive behavior. This has been demonstrated in studies in oil refineries, automated chemical plants, pulp and paper plants, and aircraft instrument plants.

Job design studies also show that if people are to be alert and responsive to their working environments, they need variety in their work. Routine, repetitious tasks tend to extinguish the individual. Science first began to get some notion of this after World War II, when research began on radar watchers, who sit in a darkened room viewing a screen on which numerous blips appear in all kinds of random patterns. Eventually, this blurs into a totally uniform background lacking variety for the viewer. And precisely when the foreign signal appears—the important signal—the watcher is not there. He is there physically, but not in any other way; he has disappeared from the scene.

Psychologists have also studied this phenomenon in various "deprived environments." Monkeys raised in restricted environmental conditions do not develop into normal adult primates. Adult humans confined to "stimulus free" environments begin to hallucinate. Workers may respond to the deprived work situation in much the same way—by disappearing (getting them back is another issue).

Specifically, what do the normal and informal experiments say about the restructuring of jobs? All jobs, even fractionated ones, should contain certain categories of activity that are important to the individual if he is to develop some kind of self-organization and self-control in the work situation. There are preparatory tasks, transformation tasks, control tasks, and auxiliary tasks in a work process.

Preparatory tasks get the worker ready to do the work required. Transformation tasks cover the main productive activity. Control tasks give the individual short-term feedback about what is going on, about how he is doing. (In many cases, this means that people may have to become their own inspectors.) Auxiliary tasks include getting supplies, disposing of materials, and so on; they may provide relief from other tasks, particularly tasks performed under stress. If possible, a job ought to contain at least these components in order to incorporate autonomy, the first of the three requirements suggested by research results.

Individual Standards Urged

Second, to promote adaptability, the job, given objectives set by the organization, should permit the individual to set his own standards of quantity and quality of performance and to obtain knowledge of results over time (long-term feedback). Within the context of the conventional industrial culture, this notion is regarded as heretical or quaint. But research suggests that if overall goals are specified, people will respond appropriately — determine what is right and what is wrong—and will work at meeting the goals.

Third, to incorporate variety, the job should contain a sufficiently large number and variety of tasks. Some companies recognize at least one aspect of this need; for instance, in very flat, unvarying situations, such as assembly lines, companies may rotate people through jobs to

provide them with variety. This is an artificial mechanism, but it probably does maintain a level of response that would otherwise disappear; it keeps workers from falling asleep at the switch.

A fourth specification for the design of restructured jobs goes beyond autonomy, adaptation, and variety into the study of the total system of work. The tasks within a job should fall into a meaningful pattern reflecting the interdependence between the individual job and the larger production system.

A related specification is that the tasks within the job ought to build and maintain the interdependence between individuals and the organization. This may occur through communication, through informal groups (if these are appropriate), and through cooperation between individuals. The tasks within the job and the jobs themselves ought to be seen as permitting relationships between individuals, permitting rotation, and encouraging the social support of one individual for another, particularly in stressful work situations. Otherwise, isolation of the individual and conflict in the work situation result.

Finally, the job and the tasks within it should enable an individual to relate what he does to the outside community in which he lives. Ask many American workers what they do, and they will tell you where they work. "What do you do?" "Oh, I work for General Motors." This is a good signal that the person has no way to relate what he does on the job to his life in the outside world. The man either does not know or cannot explain the meaning of his work; it is merely some unspecified and unlocated portion of activity in a featureless landscape called "the company." This perception can have very serious consequences for his job performance and satisfaction.

The foregoing general requirements of job design also suggest some new ways of looking at jobholders. First, the jobholder ought to have some minimal area of decisionmaking he can call his own. If he is to adapt, and if he is to achieve an autonomous working relationship, the content of his tasks ought to be sustained and bounded by recognition of the authority and responsibility required to perform them.

Second, the content of a job ought to be reasonably demanding of the individual in terms other than simply physical endurance. This is related to growth and learning, and to the need for jobs to encompass a minimum variety of activity and to relate to the environment.

One of the problems in modern industrial life is to cope in a meaningful way with individual growth. The only mechanism in wide use is that of promotions, and it goes only so far. More commonly, a job is settled once and for all. A job description is written, enshrined in the DICTIONARY OF OCCUPATIONAL TITLES, and a man can be stuck in that job forever. Promotion assumes that a man is moved to another and better job.

But in fact, the content of a given job held by a given man may be changing continually. That the same job should be different for people who have been working at it for a long time than it is for a beginner is simply not accepted. The whole standardization movement—represented by standardization of occupations and published job descriptions—is antithetical to this possibility and works against it.

In 1968 the author and colleagues from the Tavistock Institute for Human Relations of London and the Work Research Institute of Oslo, Norway, had an opportunity to apply some of the specifications just discussed to the design of actual new jobs. We were asked to help design jobs for a proposed Norwegian automated chemical fertilizer plant solely on the basis of the blueprints of the factory, before it was built or staffed. This approach would permit the fertilizer company, as its factory was being built, to prepare the organization and the jobs and skills of the people who would man the plant.

Engineers had designed the plant so that all required work (monitoring, diagnosing, and adjusting, there being no physical work performed in the plant other than maintenance) would be done at control panels in three monitoring rooms. Each control room required only one man, making a total of nine men for three work shifts. Other miscellaneous functions brought the total work force to 16 men, excluding maintenance workers.

The research team wished to avoid having people work in isolation. But to put two men in a control room would have been economically inefficient. Therefore, totally new jobs were created by combining maintenance and control functions. These new jobs were created out of theory rather than past practice. Looking at previous histories in fertilizer plants would not have revealed the requirements for the newly designed jobs.

As the completed plant now operates, at least two men are based in each control room, alternately leaving it to perform maintenance tasks. They support each other, and the new job design also brings feedback from the plant by means other than the instruments on the control panels. The new jobs required the company to teach maintenance men chemistry and to teach chemical operators maintenance. The plant now has been operating for more than 18 months and has been extremely successful.

All of the foregoing provides a background against which to examine some questions of policy for job restructuring. The first of these concerns existing job definitions and job boundaries that are cast in concrete in agreements between unions and managements, in State and Federal civil service commissions, in personnel policies, and in a multitude of other ways. Simply to go to an employer with a proposal for job restructuring is, in many instances, to go to half of the essential power. The union is the other half. And

Restructuring Jobs *continued*

Federal and State governments have contributed to the stance of both halves by institutionalizing jobs and job descriptions. Jobs can be restructured for entry purposes and for advancement. But the issue must be made a matter of public and private policy, arrived at by open discussion.

The second policy question concerns the commitment to career development, and not specifically to the individual job or to training for the individual job. In any meaningful sense, American industry has ignored career development, except for professionals, and its omission is as detrimental to individuals within the mainstream of our productive society as it is to individuals seeking entry to it.

Planning programs which concentrate on a single entry level do violence to the job design requirements discussed. The job designer, free to examine an entire logical sequence of tasks, might find that some tasks in the present entry-level job belonged in a higher stage, and that some in higher stages belonged at the entry level. In short, job restructuring has the potential to improve the whole range of industrial and service jobs at almost all levels, but only if commitment to the concept of career progression is opened up to public policy debate.

There should also be an ordered set of relationships — a string of steps — through which an individual progresses to arrive at a job that has continuity and meaning for him and for the organization. The notion of a career, of different jobs as stages in a chain, has to be made fully explicit in any program for job restructuring. There is little use in redesigning existing jobs to create entry-level positions for unskilled people unless they can move through a chain of jobs from the entry point to a desirable future in the mainstream of the employer's productive system. Acquiring skills is a transitional act. It is unreasonable to expect a person to remain in transition for 20 years, or even 2 years. He must be able to get to some level, and this level must be specified.

A third matter of public policy must concern the quality of working life. This, again, is not going to be easy, but it is evoked by social and technological changes that are modifying the environment. This matter goes beyond mere satisfaction with working conditions and directly to the essential involvement of individuals in the working world. A great many people in the younger generation—which is the next working generation—quite clearly feel that they need not work to live. But it remains unclear whether this is a response to work itself, or to the negative aspects of work as it is organized in American culture.

The following additional questions also require consideration:

How flexible must an organization become in permitting individuals to pass through it to some level at which they can stabliize and perform usefully? There is a gain to flexibility, but there is also a cost, and the trade-offs will have to be worked out with the organizations involved.

What advantages might be gained from an alteration of on- and off-the-job continued learning? America has only begun to scratch the surface with the manpower programs it has developed so far.

What commitment should organizations make to job changes that facilitate the acquisition of knowledge and skills?

Finally, how can we ensure that job restructuring does not become a victim of economic competition, in which the company that does it yields a short-term economic advantage to the company that does not?

Many planners behave as if one way of putting a job together were as good as any other. This is just not so. It may be possible to cut a skill in two and give half to man A and half to man B. But if that cut destroys any meaning in the work, the job designer had better spare the surgery.

Taking apart a job is very much like disassembling a clock or dissecting an animal. In a clock or an animal, there is an ordered relationship among parts; in jobs, there is an ordered relationship of the individual tasks to the functioning of the whole sociotechnical system. Particularly if the needs of individuals for meaningfulness in their work and to the organization are at issue, then the results of taking apart a job and reconstructing it become very serious indeed. New job structures must be relevant to the social outcomes required.

Technology today is so rich in potential variations and arrangements that job design decisions can depend almost exclusively on social considerations. Machinery and tools can be organized in a variety of ways that will achieve the same economic objectives; the real question is, what social objectives are to be satisfied. The first requirement of any program for job restructuring, therefore, is to define its social objectives with respect to the organization, the individual, and the whole society. □

They Grease Their Own Wheels

By I. William Arshack
and Don McGhee

Detroit, the automobile capital of the world, is short of transportation—at least for inner-city residents. Many of them find it impossible to work in the suburbs, where so many of the good-paying jobs are these days, because they cannot afford cars and adequate public transportation is not available.

Now some of these men and women have turned entrepreneurs so they can continue to be workers. They operate their own busline so they can get and keep jobs on the fringes of the auto city.

Formation of the innovative transportation cooperative was spurred by Garnell McAfee, an energetic auto plant union official. As a United Auto Workers bargaining committeeman at a suburban plant located 28 miles from Detroit, McAfee saw that poor transportation was a major cause of tardiness, absenteeism, short paychecks, and often dismissal from the job. No public buses ran from Detroit to the plant. Makeshift arrangements for a ride to work often broke down for those who did not or could not own a car.

McAfee and 14 others from his union local raised $6,000, mostly from individual contributions, and in July 1968, the United Brotherhood Club, Inc., bus service was born. A 1959 schoolbus was purchased for $125. Volunteers spent hundreds of spare-time hours reconditioning it. The engine was rebuilt; the outside was repainted; air-conditioning was installed; card tables, a television set, stereo music, and draperies were added.

Mr. Arshack is the Michigan Employment Security Commission coordinator for Detroit's Concentrated Employment Program and Mr. McGhee is an information officer for the Commission.

Wheels *continued*

By October, the old schoolbus had been transformed into a luxury van and was displayed in the parking lot of the suburban plant. Two hundred employees joined the Brotherhood club. Each bought a $5 share of stock and was assessed monthly dues of $5. Each new member also agreed to pay $5 a week once he began riding the bus to and from work. The weekly fare was to remain constant, whether the member worked 5, 6, or 7 days per week.

The company credit union agreed to deduct dues and bus fares from members' pay and send a monthly check to the United Brotherhood Club. ("As a side effect of this arrangement, many members have started a regular savings account with the credit union," said McAfee.)

With 200 members, the Brotherhood needed more equipment and facilities. It obtained a $50,000 loan from a local bank, bought a building to serve as a garage for storage and repairs, and added seven more used schoolbuses. McAfee took a leave of absence from his union duties to devote full time to the project. Again hundreds of hours in volunteer work were spent in renovation. The building was rewired. Doors were raised to allow entry of the buses, which were completely rebuilt, inside and out. McAfee and his volunteers worked as carpenters, mechanics, electricians, plumbers, and masons, getting the old building and vehicles ready for operation.

Regular bus service to the suburban plant got underway late in 1968. Initially, only 88 members signed up as daily riders. They were transported on two buses driven by men employed at the plant, and the buses were left in the company parking lot during the day.

A number of central points were designated for passenger pickup. Riders were assured that if they became ill on the job or had an emergency call from home, a private car would be dispatched for immediate transportation.

An appearance by McAfee on "Job Opportunity Line," a local public service television program coordinated by the

Labor Dept. photos by Billy Rose

United Brotherhood President Garnell McAfee discusses operations with Jack Tasse (standing), member of the board and one of the program's originators.

When a driver fails to show up, McAfee often takes time out from running the entire operation to run a bus. As do the other drivers, McAfee uses a citizens band radio to contact riders and let them know he is on the way. Some passengers have bought small citizens band receivers that they carry in their pockets and purses.

Conversation and cards are two of the passengers' favorite pastimes.

Mechanic Sandy Evans works on a motor block.

Michigan Employment Security Commission, and a number of newspaper stories brought the Brotherhood to the attention of people outside the plant where it was formed. Some local groups offered financial support. And requests began coming in from other plants and organizations for transportation service.

The Brotherhood has done what it can to meet the demand. In June 1969, the State employment service arranged to use the Brotherhood bus service to transport trainees under a Job Opportunities in the Business Sector (JOBS) contract to the employer's suburban plant. The facility was not served by public transportation and none of the potential trainees owned autos.

The employment service persuaded the employer to establish a payrol' deduction plan for payment of the transportation fees due United Brotherhood. It is doubtful if the trainees could have taken the suburban jobs without these special arrangements.

In September, 22 young men from the inner city were hired by Hawthorn Metals, a suburban firm, at a starting rate of $3.09 per hour. Public transportation to the plant was not available. The employer conducted his interviews at the Michigan State Employment Service's Youth Opportunity Center in downtown Detroit. Arrangements were made with the United Brotherhood to provide bus service to those youth who had been offered jobs but had no way to get to work. Now each afternoon a red and white United Brotherhood bus stops in front of the Youth Opportunity Center to pick up these young men and take them to their jobs.

In late summer, when model changeovers temporarily closed the auto plants and some of United Brotherhood's riders were out of work, the red and white buses were not idle. They were used to give hundreds of inner-city children transportation to day camps, the local zoo, beaches, and matinee performances in downtown theaters.

McAfee emphasizes that the cooperative bus service is as helpful to the suburban employer as it is to the inner-city worker or jobseeker. "We customize transportation to the needs of the individual plant," he says. "The problem

XUM

Wheels *continued*

workers face in finding a way to reach the many well-paying production jobs located in the suburbs is obviously the other side of the problem the employer encounters in filling jobs."

Even if public transportation were available, McAfee points out, the timetable of the buses would not necessarily coincide with the plants' work shifts. Inner-city residents traveling 10, 15, or 25 miles to reach suburban plants usually find it necessary to transfer from one bus to another, a very time-consuming procedure. On the other hand, United Brotherhood bus service is direct and nonstop.

Passengers board the bus in Detroit for the 25-mile run to their jobs in an electronic assembly plant outside the city.

McAfee says the cooperative has been especially valuable to women. Before the bus service, he says, inner-city women simply did not bother to apply for well-paying jobs in the suburbs that were open to them. The jobs were too far away, and lack of transportation presented a seemingly total barrier. According to one woman now riding the coop buses 25 miles to work, city jobs usually do not pay enough to cover babysitting and other expenses. Now she makes more than $100 a week.

Regular busdrivers are now hired for most runs, to allow fuller use of the bus fleet. "It's a waste to leave them parked on a company lot while the driver and his passengers are putting in their 8 hours," McAfee says. "But these full-time busdrivers are also mechanics. They must be able to make emergency repairs enroute, if something goes wrong." The driver-mechanics also perform regular maintenance and repairs on the buses.

United Brotherhood's maintenance and service capabilities have expanded along with its transportation operations. It has opened a gas station midway between Detroit and the plant where the idea of the cooperative was conceived. The station, which is open to the public, makes it possible to buy gas for the buses at lower prices. Gas station attendants also serve as utility drivers to provide emergency transportation home for members who work at the nearby plant. Between runs, busdrivers work at the station.

An oil company has agreed to allow the cooperative to manage additional gas stations. Candidates for station managers selected by the Brotherhood attend the oil company's training school. Two are currently enrolled.

The Brotherhood's main depot in Detroit has the tools, testing equipment, and machinery necessary to perform all maintenance and repair services on the fleet, including painting.

The Brotherhood has been able to expand its fleet of buses by negotiating a unique arrangement with several small churches in the Detroit area. McAfee noticed that a number of churches owned one or two old buses that were used primarily to transport members of the congregation to and from Sunday services. Most of the week the buses stood idle, but it required a considerable outlay of church funds to keep them in running order.

The Brotherhood repairs and maintains the buses without charge in exchange for the right to use them when they are not needed for church activities. The Brotherhood also supplies the churches with additional buses when they are needed for special occasions.

The Brotherhood's fleet now consists of 11 buses, plus the church vehicles that are available as a reserve during the week. Over 500 people ride the buses regularly, and the Brotherhood also operates a charter service for school groups and other local organizations for outings and travel to other cities.

McAfee says more buses could be put to use if the cooperative had the funds to obtain them. But monthly dues and weekly fares barely cover operating costs —gas, bus maintenance, driver salaries, and repayment of the loan.

"We've asked a number of foundations and civic organizations for help, but nothing has happened yet," says McAfee. "We've encountered a lot of problems, both financial and others, and have solved many of them. None of us have had experience in operating a bus service until now."

Financial and other problems notwithstanding, McAfee is making plans to improve and expand the Brotherhood's operations. "This is only the beginning," he declares. □

By ANNE WOODWARD CORRIGAN

A thatched roof pub and a few houses now comprise the English village of Milton Keynes. If all goes according to plan, however, by the turn of the century it will be a complete new city of 250,000 people. Milton Keynes is the newest bud on England's now old growth of new towns. Like most other English new towns, it is part of a concerted effort to solve a problem that also troubles the United States: Too many people and too few adequate dwellings in the older major cities.

Building in Milton Keynes, at the rate of 2,500 houses a year, is expected to begin soon. Average density will be eight dwellings to an acre—low for England but high by American suburban standards. Milton Keynes will be no glass-spired dream city. Its planners have dismissed skyscrapers as uneconomical. A monorail system, once seriously considered, was ruled out as impractical.

But England's newest new city—the first postwar town to be built to a large extent through a "private enterprise" system—has lofty social goals. Among the most notable is to make available in the new community jobs for all the people who live there. Residents could, if they desired, commute to jobs elsewhere. But the goal is to make it possible for all who wish to work as well as live in the city to do so.

Employment patterns and policies and their impact on other aspects of life have figured heavily in the planning of Llewelyn-Davies, Weeks, Forestier-Walker, and Bor, the British architectural firm handling Milton Keynes. (The same firm is making studies which will lead to a master plan for two U.S. new towns, one to be called Amherst, near Buffalo, N.Y., and a second, as yet unnamed, near Racine, Wis.) To the usual array of building, landscape, transportation, and land-use experts have been added a sizable group of demographers, sociologists, and economists. They are considering the problems of people and how they wish to work, travel, shop, and use their leisure time. They are considering, for example, the different uses of leisure which may come with a shorter workday or shorter workweek. They have noted the increasing employment of women, and the resultant need for child care centers and part-time jobs located close to home.

The planners of Milton Keynes hope to avoid the growing pains which have plagued other English new towns. And since England has been a leader in the development of these communities, they have a wealth of experience upon which to draw. Letchworth and Welwyn Garden, which date to the early 1900's, served as prototypes for the spate of new towns established after World War II. Each was laid out with a town center, neighborhoods with small shopping centers of their own, and industrial sites located along rail lines.

England's New Towns Act of 1946 launched a ring of communities outside the 5- to 10-mile stretch of undeveloped land (the green belt) that encircles London. The aim of the new towns was simple—to relieve congestion in London by making it possible for the poor to find better homes and jobs elsewhere.

Development Corporations were appointed by the government to buy land within each designated new-town area, construct housing, and develop the town. The corporations are empowered to borrow money from the national treasury at the going rate of interest (currently 9½ percent), to be repaid in 60 years. Their financial success varies. Stevenage, first new town constructed after World War II, was making a profit in only 6 years. When development is complete, a new body, the Commission for the New Towns, takes over.

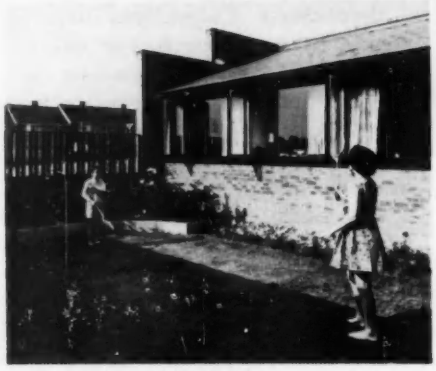
Over the years the role of private enterprise in new towns has grown. As the development corporations, using government money, proved that the new towns could be a financial success, more private investment has come in for shops, industry, and housing. But the government continues to be a major factor. Sir Frederick Osborn, one of the leading advocates of new towns in Britain in the early postwar years, says:

"We must marry private enterprise to government control. The future is in the mixed economy."

Few of the towns were totally new. Most had at least a nucleus of houses—some, even shops or industry. Industries were given special inducements to locate in them, instead of in already compacted cities. Established industries in London were encouraged to move to new towns, with the government having the final say about what industries would go where. Initially, it was hard to lure firms to new

Mrs. Corrigan, a member of the Manpower Administration information staff, is spending a year in Europe studying new towns under a Department of Labor fellowship.

Living conditions in England's new towns contrast



Harlow Development Corp. photos

towns. Now, there is a waiting list of those eager to sink new roots in the fresh soil.

Unlike many new towns elsewhere, the ones around London were intended as anything but "bedroom satellites." They were designed to provide jobs as well as houses for those who needed both. But the new towns have found it difficult to keep the availability of housing on an approximate level with job vacancies.

To begin with, housing is in shorter supply than jobs in London and in most of Britain's other big cities. There is little unemployment in London and wages for skilled workers there are the highest in the nation. Many workers are willing to pay higher rents for better accommodations in new towns (workers receive government subsidies in certain cases). They may even be willing to accept lower paying jobs in the new communities to obtain better housing.

Some who can afford it hope to buy new homes. New towns began with mostly rental facilities. When a study showed more people than expected wished to own their residences, the policy was changed. London new towns now aim for 50 percent ownership of dwellings. Milton Keynes has the same goal now, and in the future it is possible ownership there may go as high as 70 percent.

To help match London workers who need better housing with job openings in new towns, an Industrial Selection Scheme was established. The selection process is handled by two government agencies—the Greater London Council, which maintains a Housing Register composed of workers who need better living accommodations, and the Department of Employment and Productivity (DEP), which operates employment exchanges in London and the new towns. The DEP has the difficult task of trying to match

...the cramped,

Greater London Council photos

sharply with...

employers' requirements with persons with the most severe housing needs.

To qualify to move to a new city, unskilled and semiskilled London workers must be listed on the Housing Register. Most unskilled workers live in inadequate housing, but there are few job openings for them in the efficient, up-to-date industry of the new communities. When openings do exist, they are likely to be filled by the few unemployed workers already living in the new town. There is seldom a need to draw unskilled workers from London.

Semiskilled workers fare better. There is more demand for them in the new towns and those who meet the housing need requirement stand a good chance of making the move if they wish.

Most skilled workers earn, or can earn, good wages, and their families are likely to be adequately housed. Meanwhile, industry in new towns keeps demanding skilled workers. A plant which moves out of London to a new town may bring with it as many employees as wish to make the change; no housing need has to be established in this case.

But shortages of skilled workers remain, and some new or expanding industries must build staffs practically from scratch. So the rules have been relaxed to permit skilled workers who are residents of London to qualify for a new house and job in a new community even though they are not on the Housing Register. Theoretically, the aim of the new town still is partially fulfilled. By opening up one more house in London—the one the skilled worker vacates— congestion is relieved. Too often, however, it is filled by someone migrating to London.

There is an intended loophole in the Industrial Selection Scheme. If an employer in one of the new communities ringing London can prove that he cannot find any skilled worker from London to fit a particular job—after 3 or 4 weeks of trying—he may then seek a worker from some other area. Employment exchanges outside of London will list his job vacancy. Once employed however, this worker takes his chances on getting a house. New town development corporations are understandably reluctant to rent houses in such cases, since they get government subsidies only on houses rented to Londoners.

There is nothing to stop an unskilled, semiskilled, or skilled worker from getting a job in a new town on his own. New town employers can and do advertise in London for workers to fill their needs. The DEP estimates that only 25 percent of all persons employed in London-area new towns go through its employment exchanges. The Greater London Council estimate is even lower.

Of the many adjustments facing a man who gets a job in a new town, the wait for his house is perhaps the most difficult. A job and a house rarely become available at the same time. DEP officials, more interested in jobs, would like to see houses built faster. But they acknowledge there are costs involved in having a house finished but unlived in, awaiting a job opening. So jobs are filled and employees

deteriorated homes and flats of London

wait—sometimes for as long as 5 months —for housing to open up. In the interim, they must find temporary lodging near the new town or commute from London.

In the London-area new towns of Stevenage, Harlow, and Bracknell, a special Housing Allocation Scheme is at work. Under this 3-year-old plan, 15 percent of all housing in the new town is reserved for persons living in London who are in dire need of housing but for whom employment exchanges list no job vacancies in new towns. Such persons are taken to the new towns to look them over. If they want to live there, and can find employment there through their own efforts, they qualify for a house.

At first glance, there would seem to be an easy solution to the problem of matching those who need housing most with jobs in the new towns. Why not train the unskilled who need houses and offer them both houses and jobs in new towns? The DEP tried this several years ago. It did not succeed. Many persons who were actually homeless in London were still reluctant to acquire job skills and move away from familiar city surroundings. And there was a high dropout rate among those who did go to Manpower Training Centers in London.

Firms Paid for Training

Emphasis has since been shifted to those already learning skills in these centers, who are given full information about better opportunities in new towns. And in at least one new town—Basildon —which has a number of small manufacturing industries, a government training center may open up next year. Otherwise, job training is conducted by the industries themselves, with reimbursement from the government according to the type and efficiency of the training provided. Planners for Milton Keynes stress the need for training at the site of the new city itself. They hope to attract modern industries, including white-collar and service firms, which will encourage the learning of skills and thus reinforce training by local authorities and the national government.

Under a Resettlement Transfer Scheme, the government assists workers who might be overwhelmed with the cost of moving. Also under consideration is the provision of temporary lodging in new cities, to avoid initial commuting expense.

Do workers who get jobs and houses in new towns tend to keep them? The answer is consistently yes for houses. Few wish to return to urban crowding. But there is nothing to keep a worker with a house and family in a new town from returning to a job in London—where his wages were probably better. If his new home is within reasonable commuting distance of London, he may decide to do this. Obviously, the closer to London, the greater the chance of this happening.

Self-Containment Debated

With some exceptions, the self-containment of new towns—that is the proportion of residents who work as well as live there—is directly related to the commuting distance to London or the nearest other major city. In the London ring, most new towns range 20-25 miles out. All are accessible by road, rail, and bus. Milton Keynes, 52 miles from London, should be a good deal more self-contained.

Milton Keynes, in fact, represents a change of emphasis in the location of new towns. As time progressed, the new communities were seen not only as solutions for urban overcrowding—with dubious results—but as a means of drawing industry into areas of economic stagnation or decline, developing them as counter-magnets to already overdeveloped areas. The new town of Washington is being built in northeast England in a coal-mining region. Cwmbran, in south Wales, is springing up in an area in which industry had begun to locate, but where there were no living facilities for workers.

Along with this change of emphasis has gone a refocus on population goals. The bigger the city—so the theory goes—the greater the variety of workers and the more diversified the industry. Also, the greater the office employment, now lacking in most new towns. Bigger new cities also mean a more diversified culture and a better social mix. So population quotas have gone up and new towns are expanding.

Basildon now has a population of around 80,000. It will go to 140,000. Washington, designated in 1964 to house 20,000 persons, will be a city of 80,000. Milton Keynes is expected to get going toward its population target of 250,000 by the end of the century by drawing 70,000 migrants by 1981.

The private developers of Milton Keynes say citizen participation will play an important role in deciding the community's future course. The government also is concerned with public opinion about the new cities it has developed. Sociologists pointed out that new residents missed relatives and friends. The Development Corporations responded by relaxing the house-job rule, and bringing out retired parents to live near their children and grandchildren. Some new towns hired social directors, to ease residents into a new life among strangers.

There has been a great deal of discussion of the difference between self-containment and sense of community, which has larger social implications. New town critics hold that given today's transportation and communication, self-containment is no longer relevant. Advocates—including many new-town residents—stress the blessings of planned living, as opposed to haphazard urban sprawl.

Initial Goal Partially Met

The Social Survey Department (which conducts all government social research) recently completed a series of in-depth interviews with Londoners who were offered the opportunity of houses and jobs in new towns and cold-shouldered the chance to make the change. Results of the study should be ready for publication soon. The results may show that the lag between job and house availability—coupled with lower wages in new towns—discourages many persons who want to move. If the survey bears this out, stronger efforts may be made to speed up housing — a hard task — or provide better means of interim commuting.

The original goal of new towns has undoubtedly been partially met. New towns have housed some 300,000 persons from the London area since 1946. It is true, however, that not all of these were people who most needed better housing.

Now, there are larger population goals for the new cities, and a greater sensitivity to social as well as economic considerations. These changes mark the latest phase in England's long search for an effective answer to the interrelated problems of employment and housing in a modern industrial society. □

Auto Mechanics: Time for a Model Change?

By Emil Michael Aun

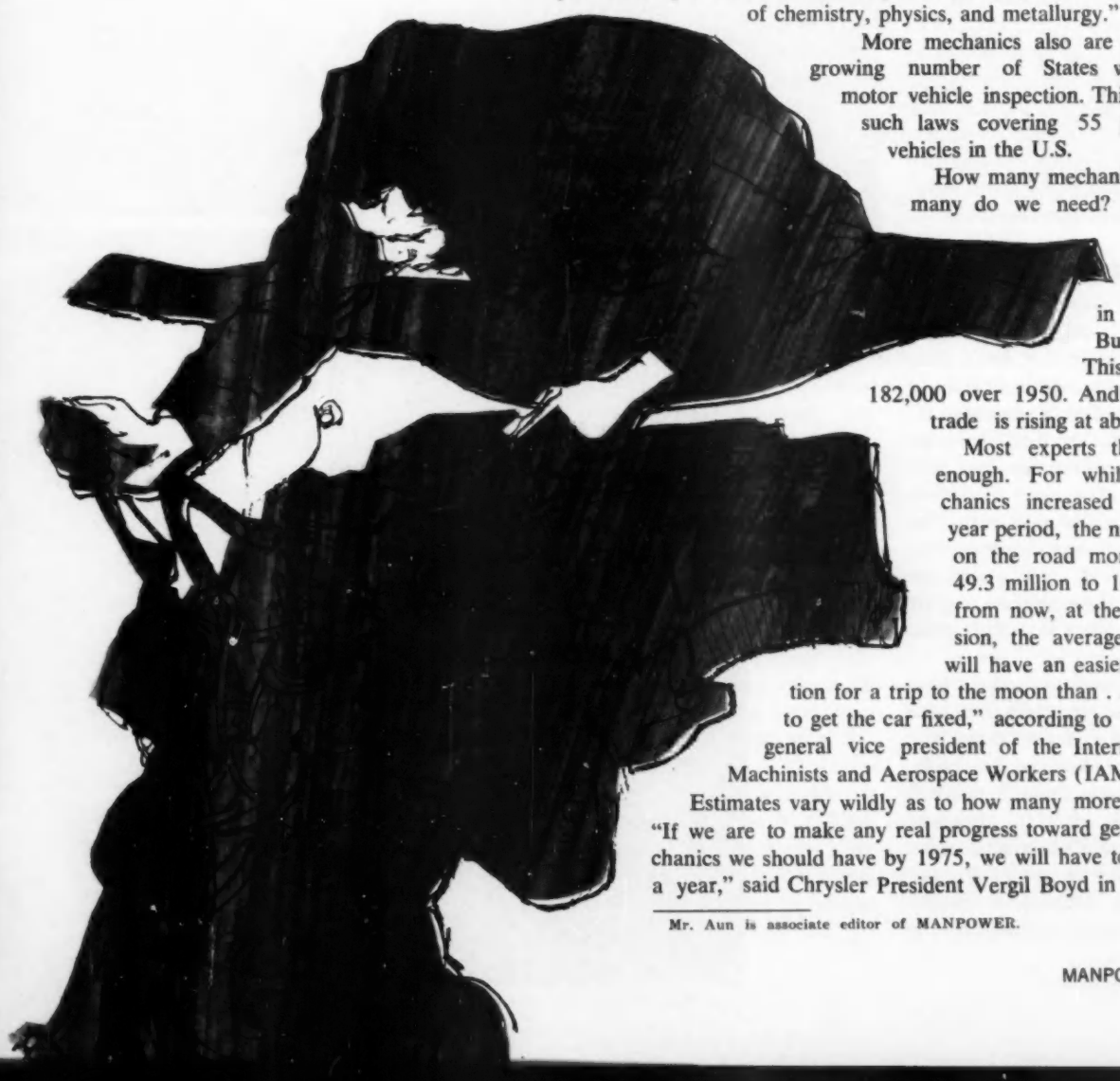
Two years ago a consumer organization bought and examined an automobile. Among the malfunctioning parts were the choke, the exhaust system, the carburetor float, the accelerator pump and pedal, the carburetor, the rear axle, a front wheel, the headlights, the front seat, a window, the fuel gauge, a rear coil spring, the air-conditioner, and the speedometer.

A used car? No, it was brand new, a 1969 best-selling model, fresh from the dealer. Admittedly it was a lemon. Most new cars have far fewer defects. But this case history does illustrate one reason why the shortage of mechanics is acute today. Cars are so complicated that it is becoming harder and harder to build them properly and keep them in good repair. Today's automobile has more than 15,000 parts.

"We seem to be fighting the losing battle of an increasingly complex vehicle," said Paul F. Lorenz, former marketing vice president for the Ford Motor Company and president of Ford of Europe.

To further aggravate the situation, there are more and more kinds of cars on the road and fewer and fewer are "plain Janes"—trade lingo for standard models with few options. Air-conditioning, a rarity in 1957, was bought by almost 40 percent of Ford's 1968 model customers. Power brakes and power steering installations more than doubled in that period. Complex new safety and emission control devices also were introduced during the sixties.

As a result, "the skills required of a proficient general automotive mechanic today are probably unparalleled in any industry," said Robert Straub, former president of the Independent Garage Owners of America. "He must know hydraulics, pneumatics, electricity, mechanics, and must have a basic grasp of chemistry, physics, and metallurgy."



More mechanics also are needed because of the growing number of States which require periodic motor vehicle inspection. Thirty-two States now have such laws covering 55 percent of the motor vehicles in the U.S.

How many mechanics do we have and how many do we need? Some 825,000 people were employed as motor vehicle mechanics and repairmen in 1968, according to the Bureau of Labor Statistics. This was an increase of 182,000 over 1950. And the net number in the trade is rising at about 16,400 a year.

Most experts think this is not nearly enough. For while repairmen and mechanics increased 28 percent in the 18-year period, the number of motor vehicles on the road more than doubled—from 49.3 million to 101 million. "Five years from now, at the current rate of expansion, the average man or woman . . . will have an easier time getting a reservation for a trip to the moon than . . . getting a reservation to get the car fixed," according to William W. Winpisinger, general vice president of the International Association of Machinists and Aerospace Workers (IAM).

Estimates vary wildly as to how many more repairmen are needed. "If we are to make any real progress toward getting the number of mechanics we should have by 1975, we will have to recruit at least 50,000 a year," said Chrysler President Vergil Boyd in 1965. "There is no real

Mr. Aun is associate editor of MANPOWER.

Auto Mechanics *continued*

shortage of mechanics," said American Motors general service manager George Brown in December 1969, "just a shortage of sound service management with resulting inefficient mechanic utilization."

Officials of the Automotive Services Industry Association say from 125,000 to 200,000 additional properly trained mechanics and body repairmen are needed now. MOTOR AGE, a trade magazine, estimated a year ago that 763,000 new repairmen would have to be trained in the next 9 years, plus 20,000 annual replacements for retirements, deaths, and dropouts. "Nobody knows," says the Independent Garage Owners of America, Inc.

Part of the difficulty is in defining what a mechanic is. The Bureau of Labor Statistics uses a list of nearly 200 job titles, ranging from adjuster to windshield man, that fall in the general category of auto repairman. While the DICTIONARY OF OCCUPATIONAL TITLES, published by the U.S. Department of Labor, includes a concise description of an automobile mechanic, there is little agreement in the industry as to the requirements of the work or the qualifications of the workman. Many men call themselves mechanics when in fact they are tune-up men, brake men, or other limited specialists.

Entrance Routes Vary

The Bureau of Apprenticeship and Training specifies a fairly rigid 4-year course of training and study for a journeyman mechanic in either engine or body work, and a 3-year program for automotive painters. The IAM supports and promotes apprenticeship but also considers a man with 4 years of on-the-job experience a qualified craftsman. The Auto Body Association of America estimates that 5 years of training and experience are required to produce a good metal man and 3½ years to make a good painter.

To scramble the picture further, there is no single source for producing auto repairmen, as there is for training doctors, lawyers, and other professionals. Some enter the trade from vocational schools or special training programs funded by the Federal Government. Others go the apprenticeship route. But the usual pathway for a mechanic is "beginning in a service station, moving on to a

Labor Dept. photos by Billy Rose

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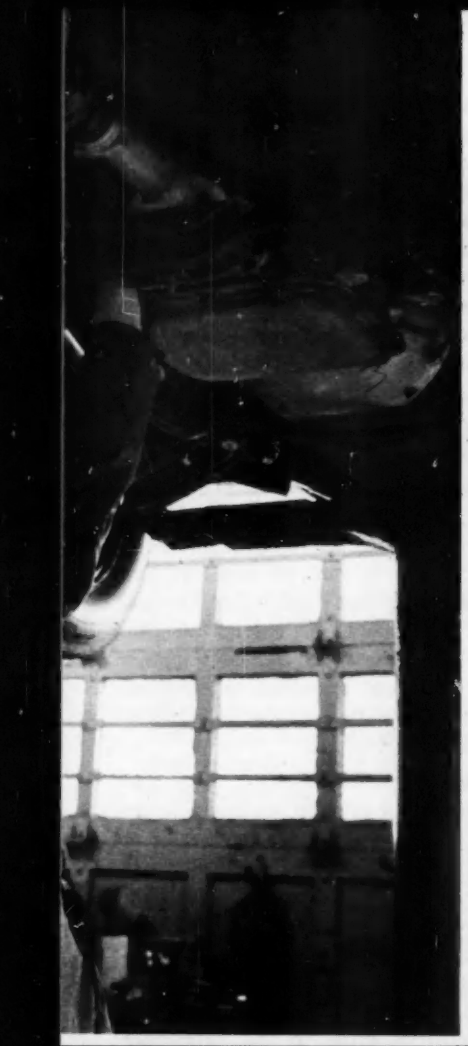
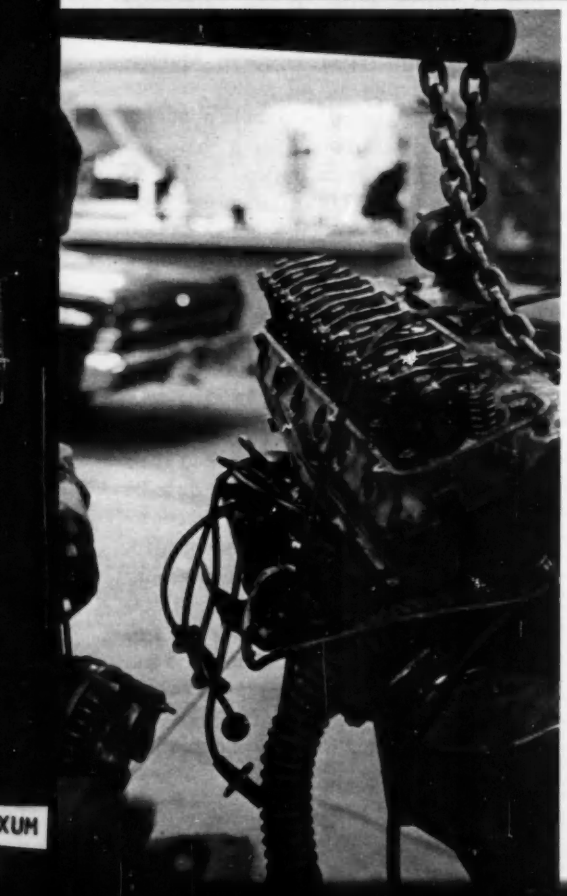




repair shop, and then going either to a car dealer, a fleet, or a mass merchandiser," according to John P. Kushnerick, editor and publisher of MOTOR AGE. "There is no way to distinguish between a really skilled expert and a half-trained and generally incompetent shade tree mechanic," he said.

The absence of a generally acceptable definition of a mechanic is hampering efforts to overcome manpower shortages, contends Paul McDonald, manager of General Motors Training Centers. "It's the key question and our inability to answer it is causing all the trouble," he said. "Suppose you went to a hospital and everyone who touches you or serves you —including the person who takes your temperature or remakes your bed—was called a doctor. You'd have a hard time deciding on shortages of personnel, or pay scales or training needed. But something like this happens when you enter a garage. The man who fills your battery with water and the most skilled technician in the place are both called mechanics."

As a consequence, auto owners are finding it more and more difficult, and more and more costly, to keep their vehicles in repair. A recent survey in St. Louis of 6,500 repairs done on 2,000 vehicles found that more than a third of all needed work either was not done or was performed unsatisfactorily.

There is considerable disagreement on why more people do not become auto repairmen. The unions blame it on poor working conditions, mediocre pay, and lack of prestige. "Mechanics are probably the lowest paid occupation in relation to the degree of skill required in the entire country," according to IAM's Winpisinger, whose union represents more than 117,000 engine and body craftsmen. He said that in 1967, the average mechanic earned $3.36 an hour (based on Bureau of Labor Statistics for fleet mechanics) compared to $3.59 for factory maintenance machinists and $5.09 for building trades journeymen. (Mechanic earnings are now an estimated $3.59 hourly.) "In most places, particularly in the smaller

cities and towns, it does not pay a young man to take the time and training required to learn the fundamental skills of a qualified mechanic," Winpisinger said.

Furthermore, most mechanics work and are paid on a "flat rate" system, which he calls essentially piece work and "a relic of an earlier age." Flat rate manuals are based on manufacturer time studies. The manuals allow so much time for the mechanic to complete a specific repair job, for example seven-tenths of an hour to adjust the front end alinement of a Buick. The mechanic receives no additional pay for any time spent on a job beyond that allowed by the manual and "it is very easy to bump into unforeseen difficulties," said Winpisinger. Many experienced mechanics like the system because they can beat the book and earn high pay, he admitted. But the slower workers and novices are discouraged. They are in effect training at their own expense, he said. Furthermore, under these conditions, "journeymen are reluctant to take their own time to teach apprentices."

The prestige factor is more subtle but still an effective barrier to new recruits, the union says. Too many people think the trade is beneath their children. "The average parent believes his offspring is infinitely better off making $95 a week with a white shirt on than he would be making $135 a week with coveralls and dirty fingernails," said Winpisinger. "It is a white collar society and a white collar psychology."

Ford Motor Company disagrees about the pay. "The problem of attracting job entrants to the skilled service trades is not related directly to compensation," Lorenz told the Federal Trade Commission on January 10, 1969. "Our surveys show that the average mechanic employed in a metropolitan-area dealership today earns nearly $10,000. Many earn more than $15,000."

He agreed however that the trade suffers from a poor image. "We have created what must be considered an almost cult-like reverence for high-status positions, and high status is not one of the rewards that attach easily to a career as an automobile mechanic . . ."

Whatever the reason, the industry's dropout rate is formidable. In 1966, Ford surveyed 5,000 vocational schools in the United States that offered some form of automotive training. Some 2,700 reported they had a complete automobile training course and that they had graduated 98,000 students in 1966. A followup survey found that only 17,000 had actually entered the automobile service field.

A partial explanation may be the type of student who graduates from vocational high schools. Very often he is not interested in academic work and because he is too young to drop out he switches to vocational school. "As long as he has to stay in school he feels he might as well take something that's fun," said General Motors' McDonald. "He has no intention of going into the trade. He does it as a hobby, so he can learn how to keep his car in trim. We have to graduate 100 to get 15 on the job."

A number of forces are at work that apparently tend to keep mechanic wages down. The IAM links low pay scales to "the general weakness of union influence in the auto repair industry." Less than 20 percent of auto mechanics belong to a union. They are therefore unable to confront their employers with the strength which workers in highly unionized industries bring to the bargaining table. Another factor is the intense competition in the repair business. Maintenance and repair of all motor vehicles is now an estimated $25 billion annual business and scrambling for a share are some 391,000 service outlets. These include more than 33,000 franchised dealers, 72,000 independent shops, 44,000 specialty repair shops, 211,000 gasoline service stations, 11,000 miscellaneous aircraft, marine, and automotive outlets, and nearly 21,000 tire, battery, and accessory dealers.

Dealers' Share Dwindles

Franchised dealers have watched their share of the auto repair market dwindle from 41 percent in 1955 to 32 percent by 1967. Both they and the independent garages are losing out to mass merchandisers led by Sears (with more than 800 auto repair centers), Montgomery Ward, J. C. Penney, and others. Chain operators, who perform only specialty repairs (wheel alinement, brake service) are "creaming the business—doing only the most profit-

able work. Faced with this kind of competition, dealers and independent garages are finding it harder to keep afloat as their earnings dwindle. The typical dealer operation, for example, now earns a profit of under 2 percent of sales, according to the National Automobile Dealers Association. The need to keep down expenses, including labor costs, seems to them imperative.

The claims payment system used by auto insurers also acts to keep down prices, and thus profits and wages. The costs for repairs (not maintenance) for American passenger vehicles is now running to about $8.8 billion annually. Nearly half this cost, more than $4 billion, was met by the insurance industry in 1968 to pay off 20 million auto-related claims. The insurers quite naturally exercise great care to keep repair costs down. The usual device is to require bids from three separate garages before permitting any repair work to be done, with the work awarded to the lowest bidder.

The resulting pressures, observers believe, are eroding the standards of the trade and scaring away possible recruits. "With the factory riding herd on the dealers, with the dealers constantly being squeezed into trying to save a buck, especially on warranty work, some corners inevitably get cut," according to IAM's Winpisinger. "The mechanic in the shop is put under pressure to do less than an adequate job, not because he does not know how to do it better but because it is cheaper and faster—and sometimes more in line with the flat rate manual—to do it inadequately."

Glen F. Kriegel, president of Auto Analysts, Inc., a diagnostic firm, said failure to establish "automotive mechanics as a profession" has made the field unattractive to the younger generation. "No air of pride of accomplishment or professionalism seems to exist," said Kriegel. "The mechanic who does exhibit some of these traits is soon caught up in the press for commission rates on hours and parts and turns his back on maintaining his professional standing and is willing to do substandard work."

As a solution, Kriegel proposes licensing automotive mechanics. Three bills on licensing have been introduced in Congress. Generally, they provide for Federal grants-in-aid to encourage States to license motor vehicle mechanics and set up training programs of 2 or 3 years to prepare candidates to meet specified levels of competence.

"The aircraft mechanic is well-trained, reliable and maintains his professional attitude and standing," said Kriegel. "His attaining of a license and . . . the knowledge that he will be held strictly accountable for his work seems to be the key to his professional attitude and social standing. Here is the route the automotive service industry must follow: Professionally licensing mechanics and structuring salaries sufficiently to eliminate the commission system and attract new men into the profession."

Licensing Effect Debated

IAM does not oppose licensing outright but the union's Annual Automotive Conference in June 1968 laid down several conditions for accepting it. Any legislation that requires mechanics to be licensed should also register and regulate automotive repair dealers, the union believes. Mechanics with 4 years' experience should be licensed automatically. Labor should receive "equal representation" on the licensing authority. Any proposed law should also include:

- "Procedures for insuring that customers receive fair and honest treatment including recourse to the licensing board and, upon proof of charges, compensation for any damages suffered.
- "Guarantees that the trade does not become fragmented through the granting of too many kinds of specialized licenses; that is, brake mechanics, transmission mechanics, tune-up mechanics, or other specialists.
- "Mandatory periodic vehicle inspection by competent licensed mechanics and not by police or other governmental agencies."

Manufacturers and dealers are even less sanguine about the benefits of licensing. "If any more roadblocks are thrown up to acquiring mechanics than we have now, it could have a very detrimental effect," said T. A. Williams, Sr., former president of the National Automobile Dealers Association. General Motors opposed licensing at hearings last October on the automotive repair industry before the Senate Subcommittee on Antitrust and Monopoly. The grounds for opposition were that licensing would "tend to decrease both the number of service outlets and the number of mechanics." American Motors also is opposed. "It would be the wrong solution," said George Brown, general service manager for American Motors, at a Detroit press conference in December. "I think the shop operator should have to certify that the work is done right."

The industry is now seeking a workable middle way that would yield the benefits of licensing (encouraging the creation of reliable servicemen) without the apparent drawbacks (blocking entry to the trade of those who pick it up along the way).

Three trade groups have concluded that certification is the answer and have created the National Automotive Technician Certification Board (NATCB) to carry out the scheme on a national scale. The plan is strictly voluntary and any mechanic who meets the requirements will be certified as a qualified service technician. Board members represent the three sponsoring trade associations, the Independent Garage Owners of America (IGOA), the National Congress of Petroleum Retailers, and the Automotive Service Industry Association. Operations are scheduled to begin this month.

Candidates may qualify for certification in one or more of 15 specialties: Engine overhaul, electrical systems, carburetion, cooling systems, braking systems, automatic transmission, front end, air-conditioning, power train and standard transmission, standard and power steering, body and fender, paint, glass, truck repairman, and frame. Any mechanic who successfully passes examinations in 8 of the first 10 categories will be awarded a Master Technicians Certificate. Proponents of the plan feel it will go a long way toward easing the effects of the manpower shortage in the trade.

"It will increase the production of the people able to be certified," said Barry McNulty, executive vice president of the Independent Garage Owners of America. "They will be in a position to make more money. This is an upgrading process and will add stature to the trade. Over the long run it will increase our ability to recruit qualified people, because it offers mechanics increased prestige and income, and it will give the public more confidence in the men to whom they entrust their cars for repairs."

The plan grew out of a 4-year test run by IGOA affiliates in Arizona and several

Auto Mechanics *continued*

other States. The Arizona plan proved the most practical and has now become the national plan. All certificates awarded in the test States will be honored by the National Automotive Technician Certification Board. To be certified, all candidates, regardless of length of experience, must pass the examination and must be reexamined and recertified every 3 years. To take the examination a mechanic must have 2 years experience in the specialty in which he wishes to qualify. The cost is $6. Test and study materials will be provided to the candidates. Examiners are now being named in each State and a schedule of examining locations is being established.

The National Auto Dealers Association (NADA) also is working on a certification program but it is not nearly as far advanced. Members of NADA are frankly divided over the advisability of establishing a separate program. Many of them would prefer to join forces with the other three trade groups and give full support to the NATCB. This would create in support of certification a combination of groups representing perhaps 80 percent of the repair industry.

One of the main effects of either licensing or certification would be to derive through upgrading better production and service from existing automotive repair manpower. Automobile manufacturers are trying to arrive at the same end by another route. They want to stretch available manpower by upgrading management and reorganizing garage work schedules. Backed by the representatives of the auto companies, the Automobile Manufacturers Association introduced in December a suggested new 2-year course in auto service management for community college students. The association hopes to have community colleges throughout the country adopt it as a part of their regular curriculum. Associate of Arts degrees would be awarded to graduates. Suggested subjects range from "Engine Diagnosis and Tune Up" to "Accounting and Business Organization."

Mismanagement is the underlying reason for service problems, according to Magnus von Braun, director of product and customer service for Chrysler, in support of the degree program. "I am convinced that if mechanics are put to work in accordance with their skill levels, most of the alleged shortages would vanish." American Motors' George Brown agrees: "We analyzed service operations at 50 of our dealerships and found that a 40-hour-a-week mechanic actually was working an average of only 28 hours. It's not his fault. It's the way dealerships are scheduling service."

Service directors for the auto companies say that due to poor planning dealership repair facilities tend to be jammed on Mondays and Tuesdays and almost out of work on Fridays. And often skilled mechanics waste their time on such routine tasks as removing hub caps and installing batteries.

Different Skill Levels Set

A recent experiment conducted by the NADA and Chrysler indicates the manufacturers may be on the right track. The 1-year pilot operation was carried out in four dealerships handling Chrysler products and demonstrated that shops can be reorganized to use the skills of mechanics and managers more effectively.

Mechanics in the pilot shops were divided into four grades, based on ability. Cars brought in for repair were rated as to the skills needed for service and then assigned to the appropriate serviceman. These ratings also determined pricing to the customers; they paid less for lesser skills. The mechanics were taken off commission and paid a guaranteed hourly salary keyed directly to their demonstrated earning levels. As a man's output increased, he earned a bonus based on his higher productivity. As he improved his skills rating, he moved up the ladder to the next higher pay grade.

"We've almost eliminated complaints," said John S. Hinckley, owner of a Dodge dealership in Ogden, Utah, one of the experimental shops. "The job goes to the man with the greatest skills, assuring much greater quality of work, which means fewer complaints and need for comebacks." He added a comment that may presage the opening of a wide doorway into the trade for the disadvantaged: "With this plan we can use a lot more people with few skills for jobs that do not require an expert."

Regardless of the changes in shop management, or the development of licensing and certification procedures, a steady supply of manpower must continue to flow into the automotive repair industry, as it must in nearly every trade. Whose primary responsibility is it to train these men? Some experts point to the manufacturers. The manufacturers say the dealers. As a practical matter, however, most dealers and independent garages are too small to support a training program of any size or length. Consequently much of the burden has fallen upon the manufacturers, the schools, and the Federal Government.

Ford, for example, operates full-time tuition-free training schools in 39 major cities for dealer mechanics. During the 1968 model year alone, the company gave more than 600,000 hours of technical service training to 29,000 mechanics.

General Motors began a training center program in 1953 and now has 30 such centers throughout the United States. From inception to the beginning of 1969, these centers provided 32 million man hours of instruction for servicemen and the current cost to the company is $7.5 million a year. Chrysler and American Motors have similar programs. In addition, the auto companies have funded a number of experimental efforts to improve service, upgrade vocational schools, and entice new talent into the trade.

For the past 9 years Ford has provided after-hours vocational training in public

schools for high school seniors, and job entry training is given to new recruits to the trade in each Ford service training center. The company has donated over $8 million worth of engines and other assemblies to schools for use in vocational training.

Chrysler and Ford have mechanic training programs for the hard-core unemployed. And Ford and General Motors work with Project Transition, a Federal program to give servicemen about to be discharged several months of job training in auto repair. In the first 10 months of 1969, GM enrolled 1,377 Project Transition trainees in its 6-week, 240-hour Advanced Vocational Training Program along with 1,219 young men graduating from vocational schools. During the same period, GM's 4-year-old Dealer Cooperative Work Training Program enrolled 2,084 underemployed dealer or service station employees. The combined classroom and on-the-job course lasts 16 weeks and makes young men with mechanical aptitudes "employable service technicians," according to GM's Paul McDonald.

The U.S. Department of Labor's contribution to training has been substantial. Job Corps has trained about 5,000 youngsters in automotive repair courses lasting 12 weeks to 2 years. The Manpower Development and Training Act from its inception in 1962 through fiscal year 1969 had enrolled nearly 78,000 people in automotive training programs. And through June 1969, employers participating in the Job Opportunities in the Business Sector (JOBS) Program had signed contracts with the Labor Department to receive Federal funds to hire and train 1,300 disadvantaged hard-core unemployed persons for automotive repair work. The industry generally welcomes government help, but experts are sharply divided over the current effort of the Labor Department to move the hard-core unemployed into repair shops.

Dr. William N. Leonard, professor of economics at Hofstra University, is very much in favor of it. "A crash program is needed in ghetto areas to get . . . youth off the streets into educational and training programs which will make them into skilled mechanics," he said. He added that boys 18 and 19, among whom unemployment is particularly high, have "a strong interest in automobiles; instead of stealing cars they could be fixing them."

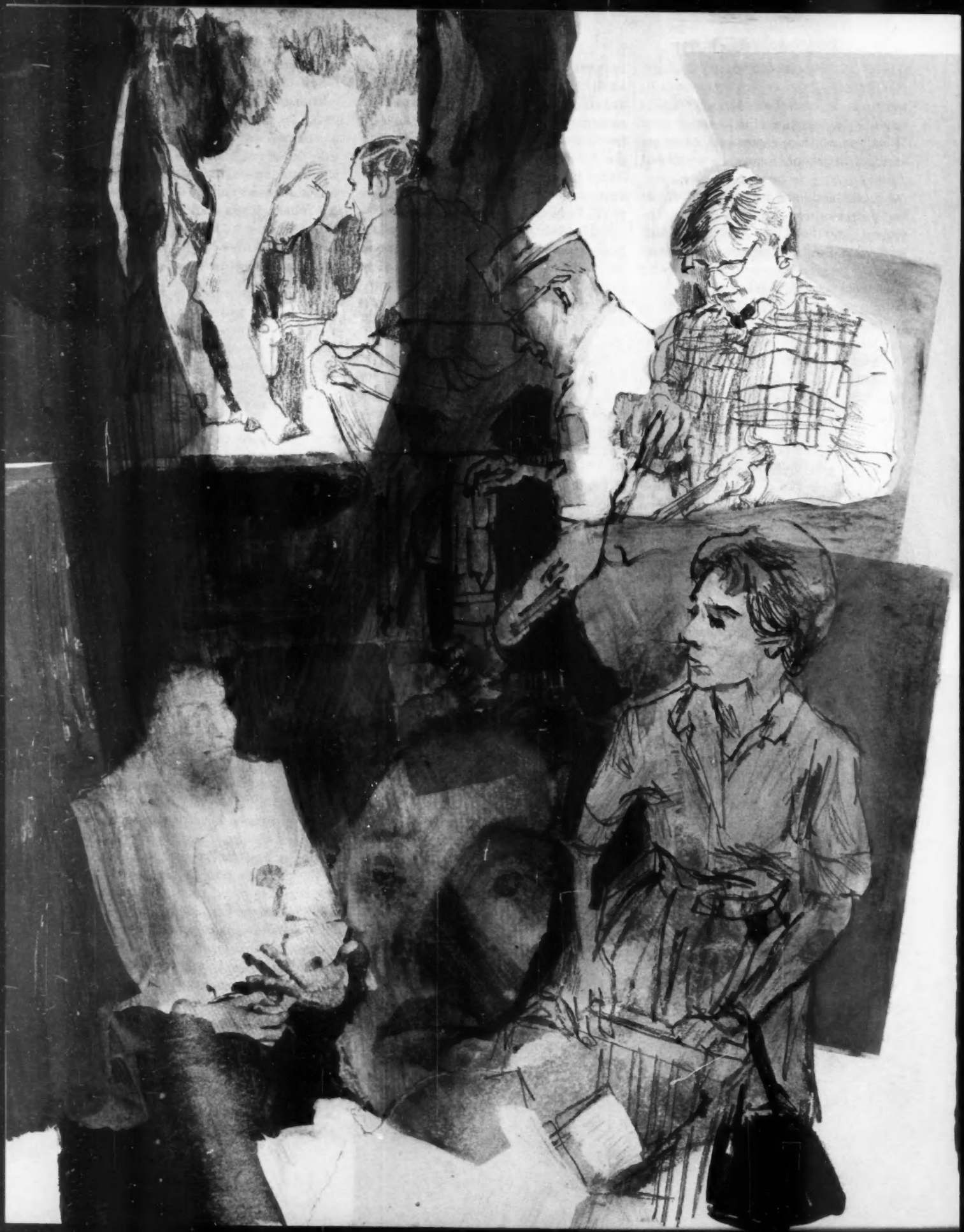
Athell Yon, speaking on behalf of the Independent Garage Owners of America, of which he is former president, believes this scheme unworkable. "The people we need must possess real skills," he said. "For example they must read blueprints, follow complicated diagrams, work in tolerances of one-ten-thousandths of an inch. To take a severely disadvantaged person off the street and train him to this degree of accuracy and usefulness is almost impossible." Representatives of General Motors and the Automotive Services Industry Association agree with this view.

More Upgrading Sought

The Independent Garage Owners does have an alternative. As Yon explained it, the group would like a program that permits repair shops to use half the allocated Government funds to hire a severely disadvantaged person and half to upgrade a person already employed in the garage—say a greaser or gas pumper. The old employee would be trained as a mechanic and the new employee would replace him. IAM's Winpisinger said this plan made sense to him "both in terms of manpower requirements and in terms of cost to the employer." Since the suggestion was made more than a year ago, the Department of Labor has moved in that direction. The new JOBS contracts permit an employer to upgrade 30 people for every 100 disadvantaged workers he hires.

The Department of Labor recognizes that training the hard-core unemployed for highly skilled jobs is a slow process, but based on experience believes it can be done. "Apprenticeable crafts, particularly the building trades, are successfully training the disadvantaged in ever-increasing numbers," said Manpower Administrator Malcolm Lovell. "And other manpower programs have demonstrated that in relatively short periods of time the disadvantaged can be trained for certain specialty work and for entry-level jobs in several hundred skills and trades, including automotive repair. It may take a little extra time and the trainees may need extra counseling and remedial education, but it can and is being done successfully.

"The auto repair industry's own research shows that people of varying skills, from beginner to master technician, can make a significant contribution to the profitable operation of a repair facility. Our programs are sufficiently varied to train men of different abilities to fill these jobs and help supply the industry's manpower needs." □



Mental Patients Work Back Into Society

By JANET K. BROWN

A mental patient, hospitalized for several years, has shown steady improvement. Medically, he is an excellent candidate for discharge, yet his chances for success on the outside look slim. Why? Because he has no marketable skills.

In taking the long step from a protected institutional environment to the competitive world outside, the key to independence often is the ability to get and hold a job. It is becoming more and more apparent that to insure the success of newly discharged patients mental hospitals must provide not only therapy but also realistic vocational and social training.

That such training can be successfully brought into the hospital itself has been demonstrated by a unique program for mental patients at the Vermont State Hospital in Waterbury. At a cost of $19,566 in Manpower Development and Training Act (MDTA) money, 40 longtime patients were given job training. Of the 37 who completed the program, 22 are holding jobs and six are in school or taking more advanced formal training.

Ten patients were trained as farmhands, 10 as maintenance men, 10 as cook helpers, and 10 as general maids. These jobs must be viewed in the light of the patients' backgrounds. Most of them had been institutionalized for a long time and were not emotionally well-equipped to go into more demanding occupations. And, as with so many State hospital patients, most had limited educational qualifications. Training also was limited by the hospital facilities that were available for the program.

One case history dramatizes the barriers project officials had to overcome to achieve success.

Margaret, 56 years old, had spent the past 33 years in the hospital. Deaf since the age of 6 months, she was able to read lips and form words with her own mouth but could not talk coherently. For a long time no one could reach her. She had a hard time getting along with people, although she was always able to do domestic chores if allowances were made for her frustration at being unable to communicate.

Gradually her emotional difficulties subsided, and Margaret progressed far enough to enter the MDTA general maid course. Like most of the patients, she soon showed a remarkable increase in morale and developed a strong sense of purpose.

Now she is living in a boarding house and does domestic work in another house 2 days a week. Although her income is supplemented by State assistance, she has reached a degree of independence that had never been anticipated. After 33 years of institutional life, she is on the outside, discovering such things as church and beauty parlors, and enjoying every step.

Planning for the Waterbury operation began in November 1968. Cooperating State agencies were the Department of Mental Health, which operates the hospital; the Department of Employment Security, which screened, counseled, and found jobs for the trainees; the Vocational Educational Division, which coordinated facilities and instruction; and the Vocational Rehabilitation Division, which directly supervised the day-to-day operation of the project.

After careful study, the hospital staff identified 40 patients who were considered good candidates for discharge. Their ages ranged from 16 to 57; their educational backgrounds spanned third grade to the second year of college. Though the majority had at one time been psychotic, selection was based on the patient's ability to function rather than on the mildness or severity of his diagnosis. Some of the patients had lost their vocational and social skills through illness and long hospitalization; younger patients had never had the opportunity to develop these skills. The trainees had been hospitalized for an average of 7½ years.

"One of the biggest challenges was retooling from purely therapeutic and custodial work arrangements to preparing people for jobs outside," said Robert Lagor, coordinator of the hospital's rehabilitation unit. "We were lucky to have instructors who were both good teachers and gifted in dealing with emotionally disturbed persons."

None of the instructors had formal training as teachers. The instructor for the general maid course was a housewife and

Mrs. Brown is public information officer for the Vermont Department of Employment Security.

Mental Patients *continued*

a former teacher. The farmhand instructor had extensive experience in agricultural management and had supervised the farm at the hospital. Maintenance and cook helper candidates were trained by individuals skilled in those jobs.

The curriculum for each course was designed by the Vocational Education Division, with the help of the instructors. Working with the emotionally ill meant approaching each student at his level, giving highly individualized instruction, and never focusing on the group to the exclusion of individuals.

Hospital Facilities Used

Hospital facilities played a key role in training. (Use of hospital facilities greatly reduced expenses. The fact that all trainees were resident patients and required no money for living expenses, which trainees in MDTA classroom programs normally receive, also helped keep costs down.) The farm, which supplies all of the hospital's milk and pork and most of the vegetables, proved ideal for barn and field work. The cook helpers practiced in the kitchen and on one occasion planned and prepared a banquet for trainees and guests.

The general maid class was responsible for cleaning an apartment on the hospital grounds and received additional training in the dormitories. Using the apartment kitchen, and doing all the shopping on a strict budget, the maid trainees prepared two meals a week—one for themselves, and the other for guests. The maintenance class did plumbing, carpentry, electrical repairs, and cleaning in hospital buildings.

Training had to be reality-oriented. In contrast to the usual work routine of mental hospital patients, the project was designed to provide a competitive work environment. Certain standards of work had to be met and deadlines were set for completion. Such training helped acquaint the candidates with the realities of the labor market.

Job training was augmented by social reorientation. Each trainee had to budget a weekly $3 allowance. "At first," said Lagor, "a few spent it instantly, but they learned." Field trips and appearances by guest lecturers held a special significance for the patient-trainees. Every contact with the everyday world was a step toward recovery. Besides helping the trainees to see others in actual work situations, field trips offered them an opportunity to test their social skills. Often the group stopped at a restaurant where each student was responsible for ordering a meal within the budget allowed him.

Supervisors learned early what motivated the group to good performance. One morale booster was the weekly gripe session in which students and instructors spoke frankly about dissatisfactions. Weekly group therapy also helped trainees air their problems and receive help in dealing with them. Uniforms promoted group cohesiveness. The trainees quickly developed an esprit de corps, which surprised even experienced rehabilitation staffers.

Students were expected to be as responsible as if they were actually on the job. There were no attendance problems. "You couldn't keep them away," remarked Tom Watts, MDTA supervisor for the Vermont Department of Education.

Trainees were rated each week on responsibility, ability to get along with others, and job performance. The instructor pointed out areas where improvement was needed and gave the students ample opportunity to raise objections. Trainees showed considerable interest in the ratings, and overall group performance steadily improved.

State Gives More Support

The State agencies cooperating in the project naturally gave more supportive services than would ordinarily be required. Five students took basic education along with occupational training. To illustrate desirable traits, employment service specialists dramatized situations such as job interviews and the first day on the job. Halfway houses were used to enable trainees to make 2- or 3-day trials in living away from the hospital.

The maids and maintenance men completed their 14-week training in June 1969, and the cook helpers and farmhands completed their 22 weeks of instruction in August. Three of the 40 trainees dropped out because of illness, leaving 37 graduates. The 22 who have jobs include five who still live at the hospital. Of 23 trainees who are now out of the hospital, 17 are working. The remaining six who have been discharged include three who are in family care homes, supportive environments where they will remain indefinitely, one in college, and two in further training.

Fourteen of the graduates remain at the hospital, four after unsuccessful attempts to live outside. Two patients are making final preparations to leave the hospital. Two more are taking adult education in the hospital school, while a third has been accepted in a formal training program.

Three work full time and a fourth part time at day-placement jobs in the community. Another patient, now employed at a sheltered workshop in the community, has a good possibility of discharge after the completion of surgery. Four individuals are considered too ill for immediate future effort.

The discharged graduates live in a variety of situations designed to help them function at their best level. One man had lived in institutions for 18 of his 29 years. Although his condition had improved and he worked well under supervision, he simply couldn't cope with the mysteries of budgeting and maintaining a proper diet for himself.

A graduate of the cook helper course, this man now works in the hospital kitchen and lives in a hospital residence hall, where meals and laundry service are provided. Before he receives his pay, the costs of room and board are deducted, leaving him with $92.28 clear every 2 weeks.

Although he needs a highly supportive setting and has it in his present situation, he is a full-time worker, fully discharged from the hospital, and proud of his ability to earn his own way.

Other graduates have achieved greater independence.

At 24, Hal had spent less than a year in the hospital but had a history of serious difficulties in adjusting. A loner, he had encountered academic problems, found it difficult to get along with others, and was involved in numerous arguments.

He had received a medical discharge from the Navy after only a few weeks of service. He tried to work, mostly in restaurants, but was considered unreliable and could not keep a job. Frustrated at these repeated failures, Hal became a patient at the State hospital.

Following treatment and job training, Hal is now discharged, living at home with his parents, and getting along better with them than he has in years. He earns $1.65 an hour working 30 hours a week at a restaurant. His job performance and social adjustment have vastly improved, largely because his self-image and motivation have changed.

Admitted to the hospital in 1964 at the age of 20, George had a combination of troubles including a seizure disorder, slurred speech, and severe adjustment problems. He had held only occasional part-time jobs and lacked marketable skills. He was assigned to the service porter course. Now discharged from the hospital, he is working full time as a janitor in one of Vermont's largest and busiest firms, earning $1.75 an hour, and doing well on the job. Currently he is living at a halfway house run by the Vermont Vocational Rehabilitation Division, but he plans to move to his own quarters soon.

For some individuals, the project has been an important step in reaching a long desired goal. Howard had been an excellent student but had showed his first signs of illness at age 17. After 7 months of hospital treatment, he was discharged and returned to his family's farm. Unable to resume school, he spent the next 21 years doing various unskilled jobs.

About a year ago, no longer able to cope with his lack of goals and a future which failed to recognize and use his talents, he entered the Waterbury hospital. Now, having completed the farmhand course, he is carrying a full academic schedule at an agricultural college and hopes to become a professional farm manager.

Job training for the mentally ill did not originate at Waterbury. The U.S. Department of Health, Education, and Welfare's Rehabilitation Services Administration reports that of the nearly 28,000 mentally ill people who were rehabilitated through its projects in 1967 almost 47 percent received some sort of training (vocational, prevocational, or personal adjustment), and of these nearly half were referred by hospitals.

Jobs Found For 900

The U.S. Department of Labor recently completed a demonstration program of vocational counseling and job placement which helped find 900 jobs for patients being discharged from the Fort Logan Mental Health Center at Denver. This project is now being repeated on a smaller scale at Illinois' Jacksonville State Hospital.

But the Waterbury project has gone further than most job training efforts involving the mentally ill. It has tapped MDTA resources to bring into the hospital a well-structured program of training which meets Federal standards, and which realistically prepares long-term patients for existing jobs in the community.

The Waterbury project (a second group of patients will begin training shortly) may have a significance beyond its impact on trainees and program planners in Vermont. There are an estimated 500,000 persons in mental hospitals in the U.S. today, about 400,000 of them in State and county institutions. Many of these institutions have, or have access to, all or most of the facilities needed for job training programs. As they continue the present trend toward decreasing their patient populations and developing closer relationships with the community, these hospitals could become readymade training centers.

As Dr. Samuel Buker, acting director of the Division of Mental Health Service Programs, National Institute of Mental Health, noted:

"With shorter periods of hospitalization now possible for many mentally ill patients, helping to prepare them for their return to their communities is an important task of the modern mental hospital. Treatment programs should include opportunities to enhance job skills. For patients who need it, vocational training is a decided boon in helping them assume their rightful place back home as self-respecting and productive citizens." □

XUM

COMICS MAKE THE JOB SCENE

The English-speaking world has been edified, preached to, or vastly entertained by the comics since publication of William Hogarth's "The Rake's Progress" in London in 1735.

Today, the daily audience for the 250 comic strips and panels syndicated in 1,700 American newspapers is estimated at 100 million. And an estimated 600 million comic books are bought on newsstands every year.

Now the proven appeal of "the funnies" is being used to tell people in the ghetto about jobs and training. "Making the Job Scene," a series of 11 short, full-color comic books developed with the help of the U.S. Department of Labor, tells in easily understood words and pictures what kinds of jobs are open in fields ranging from health care to auto repair, where to go to get training, and how to conduct yourself on the job.

The Labor Department decided to try comic book techniques after a 1966 study by its public information office revealed that existing publications were ineffective in reaching the disadvantaged. Comic-type books were picked because this picture-story-in-sequence device:

- Increases the reader's comprehension by providing him with a visualization of the author's idea. A single well-drawn picture replaces paragraphs of descriptive prose.
- Gives the appearance of being easy to read and absorb. In this way it attracts the reader and lures him into reading more.
- Has high impact because even a hasty perusal of a properly executed comic strip can convey a message. Often a reader need not read the words when the pictures are clearly drawn and cleverly arranged.

The Labor Department contracted with the American Visuals Corporation, headed by Will Eisner, creator of "The Spirit," a popular comic strip of the 1940's, and the Behavioral Science Center of Boston's Sterling Institute, to create, test, and evaluate materials using cartoon techniques.

Actual development of the books began early in 1967. Teams of Behavioral Science Center researchers went into the ghetto areas of Philadelphia and Newark and tape recorded interviews in pool rooms, among onlookers at sidewalk card games, in candy stores and other hangouts.

The researchers sought two things: Contemporary ghetto attitudes and language. The objective was to find an approach that would lend reality and truth to a series of visuals on jobs and training using comic-strip techniques. These visuals would be booklets designed to hold the interest of the disadvantaged young reader, convey knowledge of his condition and concern for his future, and move him to action.

The findings that came out of the research revealed that to reach the typical young ghetto dweller the booklets had to:

- Give the individual the sense that he is personally responsible for what happens to him.
- Stress potency and masculinity.
- Give the individual the feeling of purpose to his life.
- Picture the possibility of a bright future for him.
- Set his feet on the right track. Clearly show him how to make progress.

Initially, eight booklets were developed and field tested by the Behavioral Science Center. During the summer of 1967, 10,000 copies were distributed to State employment service offices in specially selected hard-core areas of Philadelphia and Newark. One objective was to test the new booklets against material already in the field, including job information literature featuring such nationally known figures as Pogo and standard pamphlets.

The new booklets were placed in racks alongside the existing material.

XUM

IN THE DEPTHS OF A GOV'T OFFICE BUILDING IN WASHINGTON, A FILE CLERK SHUFFLES THROUGH HIS ROUNDS...
WHO IS HE?
SQUEAK
HE OVER-HEARS A CONFERENCE.
THESE JOB PUBLICATIONS AREN'T DOING THE JOB. THEY'RE TOO DRY AND TOO TECHNICAL FOR DISADVANTAGED PEOPLE. WE NEED SOMETHING EVERYONE CAN UNDERSTAND, AND WE NEED IT NOW!!
THEY NEED HELP FAST! I GUESS IT'S TIME FOR THE MILD-MANNERED, SHUFFLING FILE CLERK TO SNEAK OFF TO THE NEAREST BROOM CLOSET, ONLY TO EMERGE AS...
YI!
CRASH
CAPTAIN COMIC!
YEAH!
LATER...
... SO GENTLEMEN, BY USING MY COMIC BOOKS, YOU WILL NOT ONLY REACH THE DISADVANTAGED- BUT THEY WILL ENJOY READING THEM AS WELL.
LATER ON A DISADVANTAGED STREET
DUE TO OUR SOCIOECONOMIC CONDITION WE ARE VIRTUALLY FUNCTIONAL ILLITERATES, NOT TRAINED TO COMPREHEND OVERLY COMPLEX CONCEPTS.
HMM, WHAT'S THIS
JOB COMICS
HEY, GROOVY. NOW THIS WE CAN UNDERSTAND- I'M GOING TO GET A JOB AS A SECRETARY.
I'VE ALWAYS WANTED TO GET INTO ELECTRONICS.
WHAT ARE YOU GOING TO GET?
I'M GOING TO GET A HAIRCUT SO I CAN READ THESE BOOKS.
HIS TRUE IDENTITY KNOWN ONLY BY A SELECT FEW, THE MILD-MANNERED SHUFFLING FILE CLERK WILL REMAIN IN THE DEPTHS OF OFFICE BUILDINGS FOR PERHAPS EONS, UNTIL ONCE AGAIN HIS HELP IS NEEDED AND HE EMERGES FROM THE BROOM CLOSET AS...
CAPTAIN COMIC! YEAH!

COMICS *continued*

Researchers monitored the racks. The results were encouraging: 92.5 percent of the new Job Scene booklets were picked up as against 47.13 percent of previously available material. Median age of those interested in the books was 17.

A year after the first test, the booklets were given a nationwide trial by the Manpower Administration, again using employment service facilities. Based on these tests certain refinements were worked out: New titles were added, and the least effective ones were dropped. The final product, 11 booklets, was published last fall and is now in use in manpower agencies around the Nation.

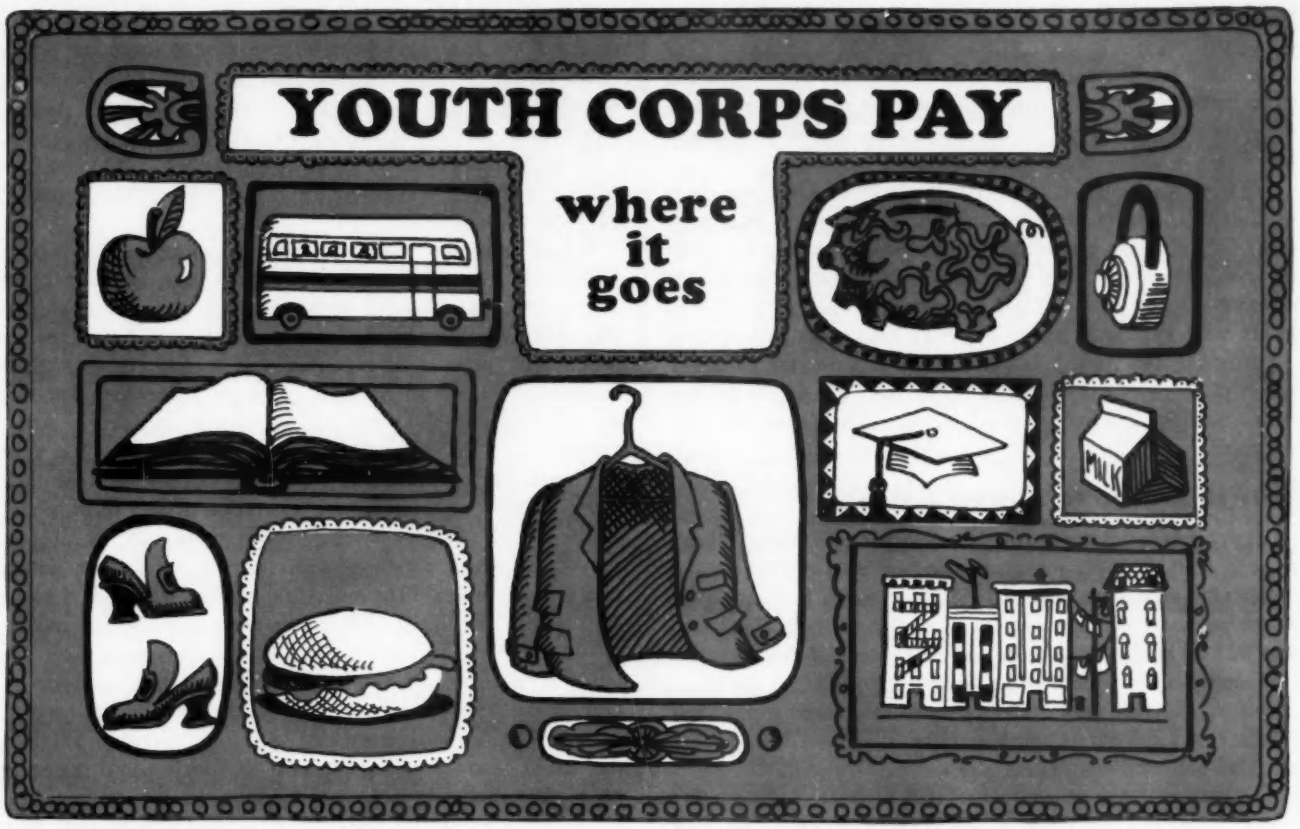
The brightly-colored hip-pocket-size booklets hold a mirror up to ghetto attitudes and deal with them directly. The language is blunt, the ideas direct, the attitudes concerned and urgent.

Nine of the eleven booklets are devoted to various occupational fields. Separate booklets cover "Machine Shop Work," "Welding," "Carpentry," "Health Work," "Retail Sales," "The Food Field," "Electronics Work," "Clerical Work," and "Auto Mechanics." The reader is given the feel of work in these vocations, told what skills are needed and how they can be developed, and what the worker can expect on the job. Most important, the booklets serve as guideposts for those who do not know what they want to do.

Two booklets, "You're Hired" and "Power Is Green," deal with elementary rules of job behavior and the value of skill training, matters which frequently are not understood by the hard-core unemployed. "You're Hired" stresses such things as the need for arriving on time and staying on the job, not wandering off. It also details what is expected of the worker on the job, how to hold a job, and how to get ahead. "Power Is Green" points out how skill training pays off in terms of better pay and job security.

Attracting the attention of people who are not accustomed to reading is difficult. For this reason, an instant-display carton for shipping the new job-guidance booklets was designed. When opened, the carton itself becomes a self-dispensing rack inviting the passerby to examine the booklets at his own pace and make his own choices.

For single copies of "Making the Job Scene" write the Manpower Administration Information Office, Washington, D.C. 20210. □



By MARY S. BEDELL

> ". . . to provide useful work experience opportunities for unemployed young men and young women, through participation in State and community work-training programs, so that their employability may be increased or their education resumed or continued."

These words, in Section III of the Economic Opportunity Act of 1964, are the congressional expression of the goals of the Neighborhood Youth Corps (NYC). Hence, the simplest measures of the program's success have compared employment and school attendance of young people enrolled in the NYC either with their own earlier experiences or with those of youth of similar characteristics, but not enrolled.

A recent study done for the Manpower Administration adds a new measure: The immediate economic consequences of NYC enrollment for the participants themselves.[1] It is based on a survey of the personal budgets (income and expenditures), the personal possessions (especially clothes), and the consumer needs of a national sample of some 2,000 young people who were enrolled in either the in-school or the out-of-school program in the spring of 1968. For comparison, the survey also covered about 500 classmates of the in-school students who were eligible for the NYC program but were still on the waiting list.

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[1] "The Economic Needs of Neighborhood Youth Corps Enrollees," by Leonard H. Goodman and Thelma D. Myint, Bureau of Social Science Research. The full report is available from the Clearinghouse for Federal Scientific and Technical Information, Springfield, Va. 22151, for $3 for a paper copy and 65 cents for microfiche (specify accession number PB-186526).

The study centered on the question, "Are the current employment provisions of the NYC realistically geared to the economic needs of the enrollees?" Apart from food and shelter, where physiological needs have been established to some extent, few truly objective measures of need exist for most items on which teenagers spend money. The "need" for these items is largely social. For this study, it was assumed that needs are the products of standards prevailing in the culture in which the individual lives and his assessment of his own level of well-being in comparison with those standards.

Thus, if most of a girl's classmates have a variety of appropriate clothing but her own wardrobe is limited and shabby, she is likely to feel she "needs" clothing even though she has enough to satisfy some adult standard of minimum decency and adequacy. The purpose of the study was to find out how disadvantaged youth define their needs and how these definitions relate to their current possessions and level of need satisfaction.

The data for students are particularly significant for the NYC. Students have usually constituted about three-fourths of NYC total enrollments, in recognition of the importance of education to the future of the Nation's youth and the primacy of economic need as a cause of leaving school. The results of the study shed light on the way students' needs for such items as transportation and clothing relate to their pursuit of education, as well as the personal cost of school attendance itself.

Nearly all of the 1,467 students in the survey were in senior high school, and 87 percent of them were 16, 17, or 18 years old. All but 6 percent of them lived with their own parents

or another adult relative, and over two-thirds were members of a family of at least five. One-third of the students lived either in a rural area or a town of less than 10,000 and nearly half lived in a city of at least 100,000.

NYC youth come from low-income families. Over one-third of the NYC group attended schools where more than one-fifth of the students came from families with incomes of $3,000 or less, and almost half of the schools reported an annual dropout rate in excess of 20 percent. Yet half of the NYC group were in schools where the NYC had enrolled less than 5 percent of the student body. In such schools, the need for the NYC program is apparent: Less than one-fourth of the NYC participants had worked before they came into the program.

Most Worked 10 to 15 Hours a Week

Thirty percent of the participants worked less than 10 hours a week at their NYC jobs, and the rest between 10 and 15 hours (the maximum allowed). Since all but a few were paid $1.25 an hour, median take-home pay from their NYC jobs was $23.80 every 2 weeks. About 15 percent of them worked a second job, on which they usually spent less than 10 hours a week. A very few received an allowance from their families. All-told, these other sources of income added $1 a week to net NYC take-home pay.

Net income from all sources totaled between $20 and $29 every 2 weeks for over half of the NYC in-school group, and about one-sixth received less than $20. Incomes of $30-$39 were reported by nearly one-fifth of the group, usually boys and girls from families with the lowest socioeconomic status who were working two jobs under the pressure of economic need. The somewhat greater concentration at the upper than at the lower end of the income scale pulled the average net income for the group up to $32 every 2 weeks.

Sixteen dollars a week is not much, but the youth used part of this small income to help ease family poverty. The largest expenditure—one-fourth of the average income—went either for direct payment of household expenses or for a contribution to their parents who used it for this purpose. (See chart.) Another 11 percent went for food, principally lunches at school or meals at their NYC jobs. Hence, over one-third of the modest amount these youngsters had to spend went for shelter and food.

Clothing took about half as much of the student's income as these necessities. Though expenditures for clothing often are more of a matter of choice than necessity, clothing is among teenagers' most prized possessions, and youth of high-school age spend more on clothing than any other age group but their immediate seniors—those between the ages of 18 and 24. Appropriate clothing is so important that about 18 percent of the out-of-school group in the study said that one reason they had left school was that they could not afford school clothing. Consequently, the buying of clothes by the in-school NYC group also may be regarded as part of school expenses which they have met through NYC participation.

Savings and insurance accounted for nearly 10 percent of income, or a little more than $3 every 2 weeks on the average. About a fourth of the group with savings (two-fifths of the NYC students) were putting money aside for educational purposes. About half as many had earmarked the money for clothing, using saving as a substitute for credit buying. The median amount of savings was only $26.50.

Overall, transportation expenses—usually to get to and from school or work—accounted for a little more than 6 percent of total expenditures.

School expenses consumed some 4 percent of the youths' budgets, or about $27 during the school year, on the average. These expenses included such items as class dues, charges for textbooks, supplementary materials, library fees, gym and locker fees, graduation expenses, and special classes such as vocational courses in business or home economics, but they do not represent the total cost of school attendance. About two-thirds of the enrollees paid between $1 and $3 a week for lunch during school hours, and about one-fifth of them spent similar amounts for transportation to and from school.

Because of expenses connected with graduation, the average outlay for school expenses understates the costs for juniors and seniors. When 11th and 12th graders were asked about their actual and anticipated graduation expenses, the median amount reported by juniors was $42 and by seniors, $85. The latter is undoubtedly the more realistic figure, considering that seniors have discovered (and paid) more of the costs.

School-related expenses can add up to over $300 in the senior year, counting the cost of lunches and transportation, but excluding necessary clothing. In the average case, they apparently would total about $150. Costs in this range give additional credence to the findings of many studies that economic reasons explain a substantial portion of school dropouts. In this study, more than one-fifth of the out-of-school group cited inability to pay school-related expenses as one reason for dropping out.

Little Spent on Personal Possessions

Other than clothing, none of the expenditures that were more a matter of choice than necessity accounted for a large proportion of the youths' budgets. Personal possessions (such as wristwatches) and personal care together represented a little more than 9 percent of income. Entertainment expenses and purchases of tobacco and alcohol combined constituted a similar proportion.

If these items, as well as spending for gifts, charitable contributions, and miscellaneous purchases, are counted as optional expenditures, the youth devoted about one-fourth of their income to such spending. Even if all clothing purchases were regarded as optional, discretionary spending would come to only a little more than 40 percent of their income.

The boys and girls had appreciably improved their material well-being since joining the NYC. The boys' wardrobes were valued at $238.50, and $113.70 of this had been accumulated after they joined NYC. The girls had added $116.70 worth of clothing to their wardrobes, which were valued at $411.20. (Wardrobe values were computed from item prices used in the budgets of the New York City Department of Welfare and, for items not listed in those budgets, from the average retail prices quoted in the Sears and Montgomery Ward catalogs.)

Compared with classmates found eligible for NYC but not

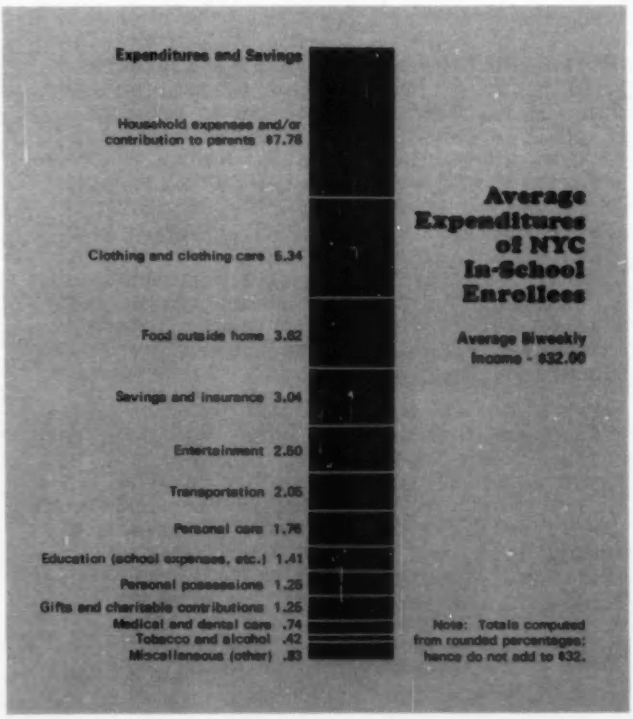
yet participating, the NYC youth had more of every article of clothing inventoried, although their holdings were quite modest for a year-round wardrobe. The NYC group also had more personal possessions. When they were asked about 11 items commonly owned by teenagers, 44 percent of the NYC group said they owned at least four of the items, whereas only 30 percent of the comparison group owned that many.

But ownership of certain material possessions does not itself signify satisfaction of need. One group of questions was directed to the unsatisfied needs of the NYC group, as defined at the beginning of this article.

Presented with a general list of goods and services and asked to indicate those categories in which they still experienced needs, only 11 percent of the NYC participants said they had no further needs. When asked to designate the category of their greatest need, about one-fifth responded "a better place to live" and almost as many said clothing. Their third priority, mentioned by 15 percent, was money for school, followed closely by medical and dental care at 13 percent. The other categories were personal care (9 percent), recreation (7 percent), and food (3 percent).

Less than 5 percent of the NYC participants indicated that any of their spending was motivated by a desire to "keep up" with their friends. Nearly two-thirds of those who believed that their peers had adequate clothing reported that their own was adequate. Similarly, somewhat more than two-thirds of those who rated their peers as having poor clothing put themselves in the same class. Only a minority of the youth felt deprived with respect to clothing because they thought their friends' wardrobes were superior.

The percentage of students reporting clothing as their greatest need was virtually identical with the percentage of out-of-school enrollees who dropped out because they could not afford school clothes. The additional cost of the needed clothing—$8 to $10 a month spread over the school year—would be a small price for further reducing the dropout rate among NYC students.


Expenditures and Savings
Household expenses and/or contribution to parents 87.78
Clothing and clothing care 6.34
Food outside home 3.62
Savings and insurance 3.04
Entertainment 2.80
Transportation 2.05
Personal care 1.76
Education (school expenses, etc.) 1.41
Personal possessions 1.25
Gifts and charitable contributions 1.25
Medical and dental care .74
Tobacco and alcohol .42
Miscellaneous (other) .83
Average Expenditures of NYC In-School Enrollees
Average Biweekly Income - $32.00
Note: Totals computed from rounded percentages; hence do not add to $32.

A sizable number of the young people who still felt unsatisfied material needs did not translate their needs into monetary terms. Less than three-fifths of the group felt they needed more money, although about nine-tenths reported unmet needs for goods and services.

About half of those who wanted a larger income estimated their needs at between $5 and $14 a week more. Nearly all of the others expressed a need for $15 or more. The median amount of additional money needed was $13 a week.

The way in which they would spend increased income differed somewhat from their expression of unsatisfied needs. Asked what they would do with additional income of $10 a week, nearly half of the NYC enrollees said they would pay bills and debts. Over a third would spend all or part of the extra money on clothing, and about a fifth would spend it on education or school-related expenses. Fifteen percent would contribute some or all of the $10 a week to their families. No other category except vacation and entertainment expenses approached 10 percent.

More Hours of Work Desired

To earn extra money, the NYC enrollees wanted to work longer hours at their NYC jobs. As indicated earlier, most of them were working between 10 and 15 hours a week, and some were working a second job. The group as a whole would like to work 18.6 hours (median) on the NYC job, or 3.6 hours more than the present maximum of 15 hours.

There is some doubt about the wisdom of permitting the additional working time, however. For example, although NYC earnings lowered financial barriers to attendance at extracurricular events, the time spent on the NYC job cut into leisure time, with the result that attendance increased relatively little. If changes in rates of pay are envisioned, the researchers suggested, provision might be made for additional income in the senior year, both to compensate for heavy graduation costs and to serve as an extra incentive to graduate.

Even at current rates of pay and hours of work, however, the study offers evidence that the NYC is helping youth from poor families to stay in school. The findings with respect to clothing, as well as those concerning the high cost of "free" public education, are compelling testimony that the students' NYC earnings are being used for the very expenses cited by fully one-third of the out-of-school group as reasons for dropping out of school. Furthermore, the NYC was found to provide employment opportunities not hitherto available to students from poor neighborhoods.

There is also evidence that the NYC is an effective means of channeling money to the poor; the students used their earnings to reduce poverty for their families and some of the effects of lifelong disadvantages for themselves. Even though some of these achievements might be regarded as subsidiary objectives of the NYC and there might be more efficient means of reaching them, it would be shortsighted to overlook them in assessing the value of the in-school program. □

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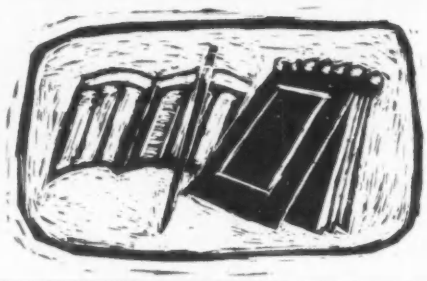
News & Notes



Robert J. Brown has been named Associate Manpower Administrator and Dr. Edward Aguirre Deputy Associate Manpower Administrator for the United States Training and Employment Service (USTES). Brown, a 40-year-old native of Seattle, has been acting director of USTES since last March when the Manpower Administration was reorganized. He was Commissioner of the Minnesota Employment Security Department until he joined the Labor Department in 1966. Dr. Aguirre is former Associate Professor of Technical and Vocational Education at San Diego State College.

* * *

A new residential manpower center begins operations in Portland, Ore., this month. It is the fifth of 30 Labor Department centers designed to prepare city youngsters for local jobs using local facilities. At peak activity, the center will have 225 men and women aged 16 through 21 in training.

* * *

More than 396,000 men, women, and youth were enrolled in the Labor Department's 10 major training and work-experience programs on September 30, 1969, compared with 282,000 a year earlier.

* * *

The annual national conference of State employment service counseling supervisors will be held in conjunction with the 1970 convention of the American Personnel and Guidance Association in New Orleans March 19-26.

* * *

The 10th edition of "The Job Guide For Young Workers" has been published by the U.S. Department of Labor. The booklet gives information on job openings now and in the future and carries brief descriptions of 150 kinds of employment young jobseekers frequently get upon leaving high school. The guide is for sale for $1.50 by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

The amount of money a family can earn and still be classified as poor has been raised. The increases range from $200 to $1,800 depending on the size of the family and whether it lives on the farm or elsewhere. The nonfarm poverty level for a family of four, for example, used to be $3,300. It is now $3,600. For a farm family the same size, the amount has been raised from $2,300 to $3,000.

* * *

The Labor Department is now funding Senior Aides projects in 19 communities under the sponsorship of the National Council of Senior Citizens. Some $3.3 million has been invested in the program since it began in February 1968, to provide community service jobs for 1,150 older persons. The recruits, aged 55 and over, are employed as education, library, hospital, social service, job placement, recreation, public health, and homemaker aides. Senior Aides must have incomes below the poverty level. They work 20 hours weekly at wages averaging $2 an hour.

* * *

Volunteers rejected for military service will be given a second chance to pass entrance tests. A new Department of Labor program will provide counseling and coaching to rejectees at special training centers. Those who decide not to go into the military will be referred to various Labor Department training programs or to suitable employment. The new Volunteer Military Rejectee Program will follow the design of an experimental program conducted during the past 4 years by the Labor Department in Baltimore, Chicago, Los Angeles, Rochester, St. Louis, San Antonio, and Washington.

* * *

Employment in nursing homes has more than doubled in the last decade, increasing from 227,000 to an estimated 480,000 in 1969. Industry growth is described in the Department of Labor's latest manpower survey entitled "Nursing Homes and Related Health Care Facilities." About 25,000 positions were unfilled in the industry at the time of the survey. The need was greatest for nurses, dietitians, nurse aides, and orderlies.

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Research

Following is a list of recent reports completed under research contracts and grants from the Manpower Administration, U.S. Department of Labor. Copies may be obtained from the Clearinghouse for Federal Scientific and Technical Information, Springfield, Va. 22151 for $3 per paper copy or 65 cents per microfiche copy. Specify accession (PB) number and the precise title of the report, and send remittance with order.

Doctoral Dissertation Grants

Family Composition and the Labor Force Activity of Married Women in the United States, by James A. Sweet, The University of Michigan (PB 179698).

Study of the employment patterns of American wives in relation to the composition of their families.

Job Training Programs in Detroit: A Comparative Study, by Donald Alfred Sommerfeld, The University of Michigan (PB 183742).

Comparison of the effectiveness of four Department of Labor sponsored training programs: An orientation training center operated by a private firm, an institutional skill training center, the orientation and Operation Mainstream phases of the Concentrated Employment Program, and an on-the-job training program.

A Theoretical Analysis of the Supply and Demand for Labor in the Steel Industry, by Lawrence S. Zudak, Purdue Research Foundation (PB 184069).

Comparison of the traditional model of supply and demand functions in the labor market and product market with conditions in actual steel mill labor markets.

The Evaluation of Government Programs: The Case of New Haven's Manpower Training Activities, by Robert S. Goldfarb, Yale University (PB 182173).

Evaluation of the adequacy of cost-benefit techniques for analyzing manpower training programs and the development of a different method of evaluating program effectiveness.

Sociological Aspects of Self-Employment and Social Welfare Among Chinese, Japanese, and Negroes in Northern Urban Areas of the U.S., 1900-1940, by Ivan H. Light, University of California, Berkeley (PB 186415).

A comparative and historical examination of the roles of business proprietorship and education in connection with the social mobility of Chinese, Japanese, and Negroes.

Labor Supply in the Construction Industry: A Case Study of Upstate New York, by Howard G. Foster, Cornell University (PB 184045).

A description, analysis, and evaluation of the sources, development, and allocation of manpower resources in the construction industry in four upstate New York cities.

An Examination of Hired Farm Workers on Iowa Farms, by Kenneth Harry Heitmann, Iowa State University (PB 183783).

An examination of the characteristics of hired laborers, their skill level, job content, and the types of farms and farmers employing them.

A Study of the Effects of Environmental Change on Human Capital Among Selected Skilled Cubans, by Paul Moncarz, The Florida State University (PB 186396).

Analysis of the extent of utilization of the education and training of skilled Cuban refugees who migrated to the United States after January 1, 1959.

A Model of Labor in Retail Trade, by Philip Glenn (Teets) Cotterill, Northwestern Univ. (PB (179697).

A study of the extent to which increases in the minimum wage occasion a trade off between employment and wages in retail trade.

Research Projects Grant

The California Farm Labor Force: A Profile—A Report Prepared for the Assembly Committee on Agriculture by Its Advisory Committee on Farm Labor Research With the Assistance of the California Department of Employment, by Cheryl J. Petersen, Sonoma State College Foundation (PB 184263).

Analysis of a comprehensive survey of the California farm labor force. It attempted to distinguish between the "professional" farmworkers and the short-term workers or those only loosely attached to the farm labor force.

Research Contracts

Urban and Regional Dimensions of Manpower Policy, by Niles M. Hansen, University of Kentucky (PB 186252).

Study of current regional development programs and alternatives, with specific reference to the need for training, employment, and worker mobility.

A Study to Develop a Model for Employment Services for the Handicapped, by Greenleigh Associates, Inc. (PB 186151).

Development of a model for the delivery of employment-related services to the handicapped based on an examination of their characteristics and needs and the adequacy of current services in Baltimore, Md., and Tacoma, Wash.

A Survey of the Employment Status of Mentally Retarded Adults in New York City, by Jack Tobias, Ida Alpert, and Arnold Birenbaum, Association for the Help of Retarded Children. (PB 185574).

Analysis of the characteristics and employment experience of "graduates" of the New York City special schools for the retarded, including current employment status and patterns of employment, the schools' use of social agencies to find employment, and the practices of social agencies in promoting employment for the retarded.

Fruit and Vegetable Harvest Mechanization, Technological Implications, by B. F. Cargill and G. E. Rossmiller, Michigan State University.

The first of three publications emanating from a nationwide project on the manpower implications of mechanization in fruit and vegetable harvesting. This report was based on a seminar held in December 1968 on production technology in the fruit and vegetable industry.
(Available for $3.50 from the American Society of Agricultural Engineers, St. Joseph, Mich. 49085, or Bulletin Office, Agricultural Hall, Michigan State University, East Lansing, Mich. 48823.)

Optimizing the Benefits of Neighborhood Youth Corps (NYC) Projects for Rural Youth, by Guy H. Miles, William F. Henry, and Ronald N. Taylor, North Star Research and Development Institute.

A three-part report on a study to determine how NYC programs could be better adapted to meet the needs of rural youth in both in-and-of-school programs.

Survey of Recent Literature (PB 184980).

Phase I—Reports on a series of interviews with a broad range of rural and urban residents in 12 midwestern rural counties and in Des Moines and Minneapolis (PB 184977).

Phase II—Tests hypotheses developed in Phase I (PB 185881).

The Economic Needs of Neighborhood Youth Corps Enrollees, by Leonard H. Goodman and Thelma D. Myint, Bureau of Social Science Research, Inc. (PB 186526).

Analysis of the economic needs of enrollees and of the extent to which their needs have been satisfied through participation in the NYC program.

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MEET CAPTAIN COMIC – SUPERCARTOONIST

Turn to page 27 and read the first (and very likely the last) installment of the adventures of Captain Comic and find out how ZAP, POW, WHAM, and BOOM were put into the effort to tell the disadvantaged about jobs and training.